

F.H.W.A. REGION	STATE	PROJECT NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340584	1	31	

**TRACE CONSULTING**  
1201 E. Jefferson St.  
Suite 3  
Phoenix, AZ 85034

DR:SD DES:GS CK:CJ  
DATE:03/23 DATE:03/23 DATE:03/23

# CITY OF PHOENIX STREET TRANSPORTATION DEPARTMENT DESIGN AND CONSTRUCTION MANAGEMENT DIVISION THOMAS ROAD AND INDIAN SCHOOL ROAD INTERSECTIONS TRAFFIC SIGNAL UPGRADES

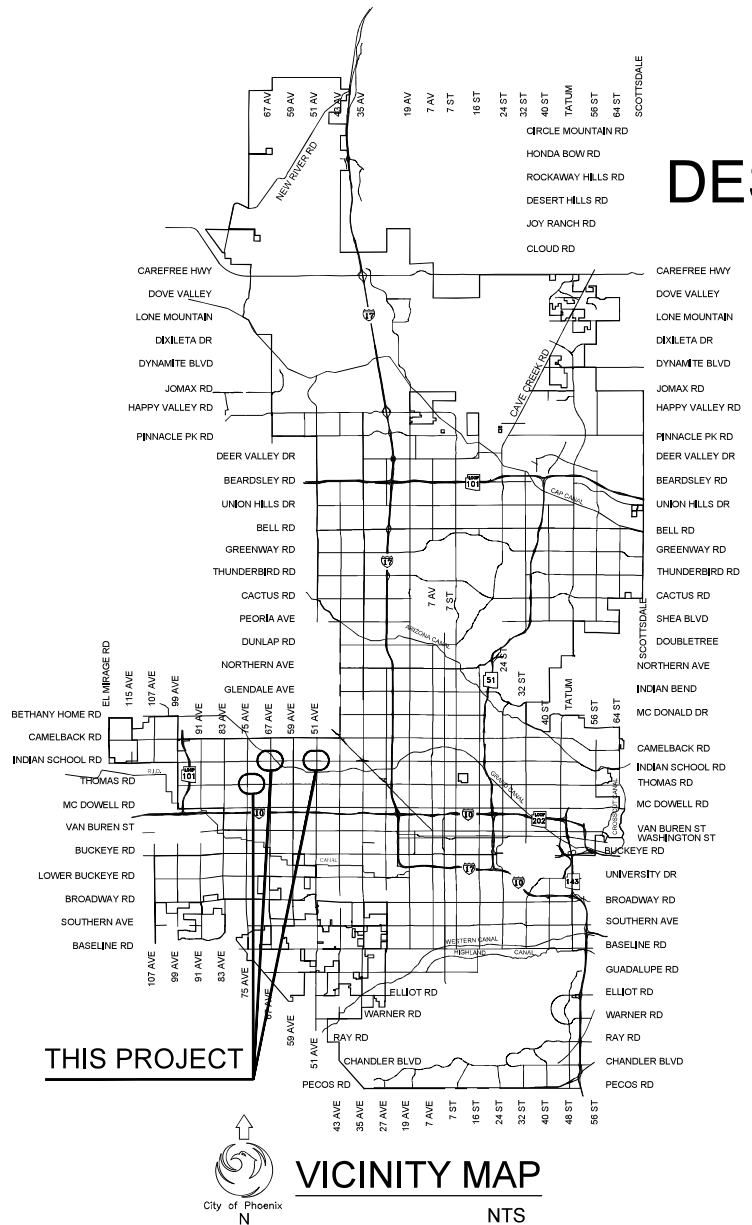
ST89340584

FEDERAL AID NO.: PHX-0(355)D

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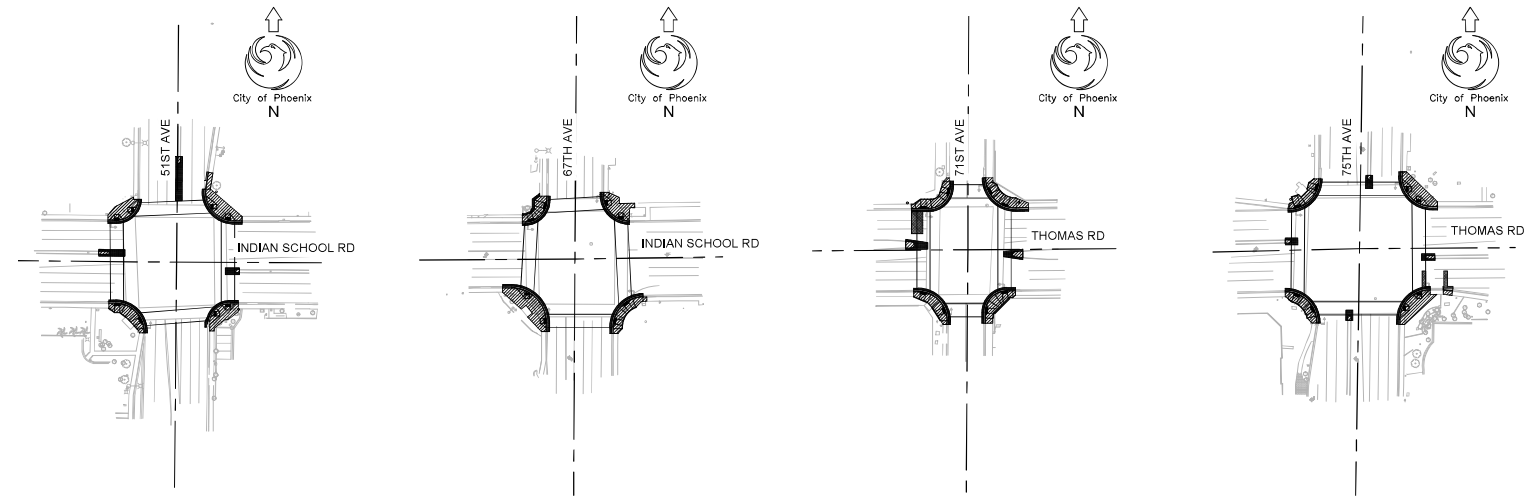


2023



THIS PROJECT

**VICINITY MAP**  
NTS



**KEY MAP**  
NTS

○ PLAN SHEETS

LENGTH OF PROJECT = 848 LF = 0.161 MILES  
AREA OF DISTURBANCE = 0.461 ACRES (<1 ACRE)

- MAYOR**  
KATE GALLEGO
- VICE MAYOR**  
LAURA PASTOR
- CITY MANAGER**  
JEFF BARTON
- CITY COUNCIL**

- DISTRICT NO 1. ANN O'BRIEN
- DISTRICT NO 2. JIM WARING
- DISTRICT NO 3. DEBRA STARK
- DISTRICT NO 4. LAURA PASTOR
- DISTRICT NO 5. BETTY GUARDADO
- DISTRICT NO 6. KEVIN ROBINSON
- DISTRICT NO 7. YASSAMIN ANSARI
- DISTRICT NO 8. KESHA HODGE WASHINGTON

**SHEET INDEX**

SHEET NO.	SHEET TITLE
1	COVER SHEET
2	LEGEND & NOTES
3	WATER GENERAL NOTES
4	DETAILS & QUANTITY SUMMARY
5	SRP UNDERCROSSING DETAIL
6	51ST & INDIAN SCHOOL SURVEY CONTROL
7	67TH & INDIAN SCHOOL SURVEY CONTROL
8	71ST & THOMAS SURVEY CONTROL
9	75TH & THOMAS SURVEY CONTROL
10	51ST & INDIAN SCHOOL RAMP IMPROVEMENT PLAN
11	67TH & INDIAN SCHOOL RAMP IMPROVEMENT PLAN
12	71ST & THOMAS RAMP IMPROVEMENT PLAN
13	75TH & THOMAS RAMP IMPROVEMENT PLAN
14	51ST & INDIAN SCHOOL FOUNDATION PLAN
15	51ST & INDIAN SCHOOL EQUIPMENT
16	51ST & INDIAN SCHOOL WIRING PLAN
17	51ST & INDIAN SCHOOL RAMP DETAILS
18	67TH & INDIAN SCHOOL FOUNDATION PLAN
19	67TH & INDIAN SCHOOL EQUIPMENT
20	67TH & INDIAN SCHOOL WIRING PLAN
21	67TH & INDIAN SCHOOL RAMP DETAILS
22	71ST & THOMAS FOUNDATION PLAN
23	71ST & THOMAS EQUIPMENT
24	71ST & THOMAS WIRING PLAN
25	71ST & THOMAS RAMP DETAILS
26	75TH & THOMAS FOUNDATION PLAN
27	75TH & THOMAS EQUIPMENT
28	75TH & THOMAS WIRING PLAN
29	75TH & THOMAS RAMP DETAILS
30	STRIPING PLAN
31	STRIPING PLAN

**CITY BENCHMARKS:**

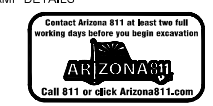
SEE SURVEY CONTROL SHEETS FOR PRIMARY AND SECONDARY CITY OF PHOENIX BENCHMARKS

**QUARTER SECTIONS:**

14-10, 14-11, 14-12, 15-10, 15-11, 15-12, 16-12, 16-13, 16-16, 16-17, 17-12, 17-13, 17-16, 17-17

APPROVED 08/29/23  
ASSISTANT STREET TRANSPORTATION DIRECTOR

APPROVED 08/28/23  
DEPUTY STREET TRANSPORTATION DIRECTOR



"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28. THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

ST89340584: THOMAS RD & INDIAN SCHOOL RD INTERSECTIONS - TRAFFIC SIGNAL UPGRADES: FINAL PLANS

RAMP AND SIGNAL IMPROVEMENTS:  
 PHOENIX STREET – MARICOPA CO.  
 THOMAS RD & INDIAN SCHOOL RD

**LEGEND**

<p>▲ BENCHMARK</p> <p>⊙ NEW SURVEY MONUMENT – M.A.G. DETAIL 120-1 TYPE "B"</p> <p>⊙ EXISTING SURVEY MONUMENT – M.A.G. DETAIL 120-1 TYPE "B"</p> <p>⊙ NEW SURVEY MONUMENT – M.A.G. DETAIL 120-1 TYPE "A"</p> <p>⊙ EXISTING SURVEY MONUMENT – M.A.G. DETAIL 120-1 TYPE "A"</p> <p>===== NEW COMBINED CURB &amp; GUTTER – M.A.G. DETAIL 220 TYPE "A"</p> <p>===== EXISTING COMBINED CURB &amp; GUTTER</p> <p>////// NEW CONCRETE SIDEWALK – C.O.P. STD. DETAIL P1230</p> <p>////// EXISTING CONCRETE SIDEWALK</p> <p>===== NEW CONCRETE DRIVEWAY OR ALLEY ENT. PER DETAIL NO. ON PLANS</p> <p>===== EXISTING CONCRETE DRIVEWAY OR ALLEY ENT.</p> <p>===== NEW CONCRETE SIDEWALK RAMP PER DETAIL ON PLANS</p> <p>===== EXISTING CONCRETE SIDEWALK RAMP</p> <p>----- EXISTING EASEMENT LINE</p> <p>----- EXISTING R/W LINE</p> <p>----- EXISTING PROPERTY LINE</p> <p>----- EXISTING PAVEMENT CENTER LINE OR MONUMENT LINE</p> <p>===== NEW DECORATIVE PAVEMENT</p> <p>===== EXISTING DECORATIVE PAVEMENT</p> <p>—C— CUT LIMIT</p> <p>—F— FILL LIMIT</p> <p>===== NEW BLOCK WALL</p> <p>===== EXISTING BLOCK WALL</p> <p>—X— NEW WIRE FENCE</p> <p>—X— EXISTING WIRE FENCE</p> <p>===== EXISTING PAVEMENT</p> <p>===== NEW MAILBOX</p> <p>===== EXISTING MAILBOX</p> <p>● NEW IRRIGATION STANDPIPE – M.A.G. 503</p> <p>● EXISTING IRRIGATION STANDPIPE</p> <p>● NEW OR RELOCATED FIRE HYDRANT BY CONTRACTOR</p> <p>● EXISTING FIRE HYDRANT</p> <p>⊙ NEW OR RELOCATED UTILITY VALVE BY CONTRACTOR</p> <p>⊙ EXISTING UTILITY VALVE</p> <p>⊙ NEW OR RELOCATED IRRIGATION BOX BY CONTRACTOR</p> <p>⊙ EXISTING IRRIGATION BOX</p> <p>⊙ ADJUST EXISTING WATER VALVE BOX – C.O.P. STD. DETAIL P1391</p> <p>—3/4" W— M NEW WATER SERVICE W/SIZE AND WATER METER BOX</p> <p>—3/4" W— M EXISTING WATER SERVICE W/SIZE AND WATER METER BOX</p> <p>—12" DIP W— NEW UTILITY LINE W/ SIZE &amp; TYPE (12" AND SMALLER)</p> <p>—12" DIP W— EXISTING UTILITY LINE W/ SIZE &amp; TYPE (12" AND SMALLER)</p> <p>—36" DIP W— NEW UTILITY LINE W/ SIZE &amp; TYPE (GREATER THAN 12")</p> <p>—36" DIP W— EXISTING UTILITY LINE W/ SIZE &amp; TYPE (GREATER THAN 12")</p> <p>⊙ NEW MANHOLE (UTILITY DESIGNATION IN CENTER)</p> <p>⊙ EXISTING MANHOLE (UTILITY DESIGNATION IN CENTER)</p> <p>===== NEW STORM SEWER (GREATER THAN 12")</p> <p>===== EXISTING STORM SEWER OR NEW STORM SEWER SHOWN ON SEPARATE PLANS (GREATER THAN 12")</p> <p>===== NEW CATCH BASIN, GUTTER INLET (LENGTH TO SCALE)</p> <p>===== EXISTING CATCH BASIN, GUTTER LENGTH</p> <p>===== NEW CATCH BASIN, CURB INLET (LENGTH TO SCALE)</p> <p>===== EXISTING CATCH BASIN, CURB INLET</p> <p>===== NEW CATCH BASIN, CURB &amp; GUTTER INLET (LENGTH TO SCALE)</p> <p>===== EXSITING CATCH BASIN, CURB &amp; GUTTER INLET</p>	<p>—T.M.— EXISTING WATER VALVE W/ TOP OF OPERATING NUT ELEVATION</p> <p>▲ NEW STREET OR TRAFFIC SIGN</p> <p>▲ EXISTING STREET OR TRAFFIC SIGN</p> <p>— — — NEW TRAFFIC SIGNAL POLE W/ MAST ARM &amp; SIGNAL INDICATIONS</p> <p>— — — EXISTING TRAFFIC SIGNAL POLE W/ MAST ARM &amp; SIGNAL INDICATIONS</p> <p>⊙ NEW OR RELOCATED UTILITY POLE W/ LINE INDICATING WIRE DIRECTION</p> <p>⊙ EXISTING UTILITY POLE W/ LINE INDICATING WIRE DIRECTION</p> <p>— — — NEW OR RELOCATED POWER POLE DOWN GUY ANCHOR</p> <p>— — — EXISTING POWER POLE DOWN GUY ANCHOR</p> <p>XX--⊙ NEW STREET LIGHT &amp; POLE</p> <p>XX--⊙ EXISTING STREET LIGHT &amp; POLE</p> <p>XX NEW STREET LIGHT</p> <p>XX EXISTING STREET LIGHT</p> <p>⊗ EXISTING TREE OR STUMP TO BE REMOVED (GREATER THAN 12" DIA.)</p> <p>⊗ EXISTING TREE OR STUMP TO BE REMOVED 12" DIA. OR LESS (NPI)</p> <p>⊗ EXISTING TREE TO BE TRANSPLANTED BY CONTRACTOR</p> <p>⊗ EXISTING TREE TO REMAIN (GREATER THAN 12" DIA.)</p> <p>⊗ EXISTING TREE TO REMAIN (12" DIA. OR LESS)</p> <p>* EXISTING PINE TREE</p> <p>⊗ EXISTING PALM TREE</p> <p>⊗ EXISTING LARGE SHRUB</p> <p>⊗ EXISTING SMALL SHRUB</p> <p>● EXISTING BUSH</p> <p>S SAWCUT &amp; MATCH EXISTING</p> <p>M MATCH EXISTING</p> <p>L EXISTING STREET LIGHT POLE AND PULL BOX, PROTECT IN PLACE</p> <p>E EXISTING ELECTRICAL JUNCTION BOX, PROTECT IN PLACE</p> <p>T EXISTING TELEPHONE RISER BOX, PROTECT IN PLACE</p> <p>→ FLOW ARROW</p>
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**NOTES**

- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ANY ISSUED CONTRACT, ADDENDUMS, CONTRACT SPECIAL PROVISIONS AND DETAILS, PLANS, 2015 CITY OF PHOENIX SUPPLEMENTS TO MAG STANDARD SPECIFICATIONS AND DETAILS, AND 2015 MAG STANDARD SPECIFICATIONS AND DETAILS, IN THAT ORDER OF PRECEDENCE.
- ALL STORM SEWER MANHOLES ARE TO BE CONSTRUCTED WITHOUT STEPS.
- PIPE CONNECTIONS TO EXISTING CONCRETE PIPE MAINS SHALL BE MADE IN ACCORDANCE WITH DETAILS CALLED OUT ON THE PLANS. CONNECTION TO MAINS SHALL NOT BE CLOSER THAN 5 FEET, CENTER TO CENTER.
- PIPE CONNECTIONS TO NEW PRECAST CONCRETE PIPE MAINS, SHALL BE MADE WITH FACTORY MADE WYES OR TEES. THE DETAIL OF THE FITTINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. PIPE CONNECTIONS TO NEW CAST IN PLACE CONCRETE PIPE MAINS SHALL BE MADE PER COP STD DTL P1576.
- CATCH BASIN CONNECTOR PIPES SHALL BE LAID ON A STRAIGHT ALIGNMENT AND SLOPE UNLESS OTHERWISE SPECIFIED. IF BREAKS IN ALIGNMENT OR SLOPE ARE NECESSARY TO MEET FIELD CONDITIONS, THE MAXIMUM DEFLECTION SHALL BE 22-1/2 DEGREES. THE BEND SHALL BE COLLARED ACCORDING TO MAG STD DTL 505. ANY ANGLE BENDS GREATER THAN 22-1/2 DEGREES SHALL BE PREFABRICATED. CONNECTOR PIPES SHALL CONNECT TO CATCH BASIN WALLS AT AN ANGLE NOT TO EXCEED 22-1/2 DEGREES FROM PERPENDICULAR.
- CONTRACTOR SHALL CONFIRM PIPE MATERIAL AT DESIGNATED CONNECTION POINTS PRIOR TO ORDERING FITTINGS.
- FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL VERTICAL AND HORIZONTAL CONTROLS ARE LOCATED ONLY APPROXIMATELY AND TO THE BEST AVAILABLE INFORMATION PROVIDED VARIOUS OWNERS OF THE FACILITIES, AND SUPPLEMENTED BY VISUAL SURFACE INFORMATION WHERE APPROPRIATE. ACCURACY, LOCATION AND COMPLETENESS OF THIS INFORMATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO INITIATION OF CONSTRUCTION.
- EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
- AT LEAST TWO WORKING DAYS BEFORE CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ARIZONA 811 (FORMERLY BLUESTAKE) TO FIND AND FLAG UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT OTHER APPROPRIATE UTILITIES DIRECTLY AND VERIFY LOCATION INFORMATION IF THEY ARE NOT IN THE ARIZONA 811 SYSTEM OR IF ARIZONA 811 FAILS TO MARK THE UTILITIES.
- VERTICAL CONTROL IS BASED ON PHOENIX DATUM NGVD-29.
- UNLESS OTHERWISE NOTED, STATIONS SHOWN ON PIPE PROFILES ARE ALONG CENTERLINE OF PIPE.
- UNLESS OTHERWISE NOTED, PIPE SHALL BE BEDDED IN ACCORDANCE WITH CITY OF PHOENIX DETAIL P1200.
- CATCH BASINS ARE STATIONED PERPENDICULAR TO THE CONSTRUCTION CENTERLINE AND AT THE CENTERLINE OF THE CATCH BASIN.
- SANITARY SEWER MAINS AND TAPS CROSSING OVER STORM DRAIN MAINS SHALL BE SUPPORTED PER MAG STD DTL 403-1, 403-2, OR 403-3.
- ANY AREA OR ITEMS ALTERED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION AND LOCATION UNLESS OTHERWISE SPECIFIED.
- ALL EXISTING PRECAST CONCRETE SAFETY CURBS AND ALL EXISTING WOODEN PARKING CURBS, WHICH ARE INSIDE THE RIGHT OF WAY AND APPROXIMATELY PARALLEL TO THE NEW CURB LINE, SHALL BE RESET ON THE RIGHT OF WAY DIRECTLY OPPOSITE THEIR EXISTING LOCATION, WITH THE BACK EDGE OF THE RIGHT OF WAY LINE. ALL OTHER PRECAST CONCRETE SAFETY CURBS INSIDE THE STREET RIGHT OF WAY SHALL BE SALVAGED AND STOCKPILED FOR THE OWNER AT THE RIGHT OF WAY LINE.
- ALL EXISTING PRECAST CONCRETE SAFETY CURBS OUTSIDE THE RIGHT OF WAY WHICH ARE DISTURBED BY NEW CONSTRUCTION SHALL BE RESET IN THEIR ORIGINAL POSITION BY THE CONTRACTOR.
- ALL EXISTING DRIVEWAYS AND ALL EXISTING ALLEYS SHALL BE GRADED TO MATCH THE NEW WORK IN ACCORDANCE WITH COP STD DTL P1164, UNLESS OTHERWISE SPECIFIED. EXISTING SURFACING SHALL BE REMOVED AND REPLACED AS NECESSARY.
- UNLESS OTHERWISE PROVIDED ON THE PLANS, EXISTING AC OR PCC DRIVEWAYS AND SIDEWALKS WHICH FALL WITHIN OR ABUT THE RIGHT OF WAY SHALL BE CONNECTED TO THE NEW WORK AS FOLLOWS:
  - THE SPACE BETWEEN THE BACK OF NEW DRIVEWAY ENTRANCES AND EXISTING AC DRIVEWAYS SHALL BE FILLED WITH A MINIMUM OF 3" ACSC ON 100% COMPACTED NATIVE SOIL WHERE EXISTING PAVEMENT AND BASE THICKNESS EXCEED THE MINIMUMS, MATCH THE EXISTING.
  - THE SPACE BETWEEN BACK OF NEW SIDEWALKS AND EXISTING PRIVATE SIDEWALKS, AND THE SPACE BETWEEN THE BACK OF NEW DRIVEWAY ENTRANCES AND EXISTING PCC DRIVEWAYS SHALL BE FILLED WITH PCC. THE THICKNESS AND CLASS SHALL MATCH THAT OF THE NEW SIDEWALK OR DRIVEWAY ENTRANCE.
  - UNLESS OTHERWISE PROVIDED ON THE PLANS, THE SPACE BETWEEN THE BACK OF NEW SIDEWALK AND EXISTING AC PARKING LOTS, WHICH ARE WITHIN OR ABUT THE R/W SHALL BE FILLED WITH 2" ACSC ON 100% COMPACTED NATIVE SOIL.
- EXISTING IRRIGATION BERMS DISTURBED BY NEW CONSTRUCTION SHALL BE RECONSTRUCTED AS SHOWN ON PLANS. IN THE EVENT THE PLANS DO NOT CONTAIN RECONSTRUCTION DETAILS, EXISTING IRRIGATION BERMS SHALL BE RESTORED IN THEIR ORIGINAL CONDITION AND LOCATION.
- ALL CONCRETE TO BE REMOVED AND REPLACED SHALL BE SAWCUT TO THE NEAREST JOINT.
- CATCH BASIN ACCESS FRAME AND COVERS SHALL BE CONSTRUCTED PER C.O.P. DETAIL P1561.
- CONTRACTOR SHALL USE EXTREME CAUTION WHEN DIGGING NEAR ANY ACP WATER LINE. SHOULD THE LINE BECOME EXPOSED, THE EXPOSED LINE SHALL BE REPLACED WITH NEW DIP FROM JOINT TO JOINT AT THE CONTRACTOR'S EXPENSE.

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340584	2	31
<b>TRACE CONSULTING</b>			1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034		
DR:SD	DES:GS	CK:CJ			
DATE:03/23	DATE:03/23	DATE:03/23			

**NOTES (CONT.)**

- WATER METER BOX AND COVER RELOCATIONS SHALL BE PLACED WITHIN THE COP RIGHT OF WAY. CONTRACTOR SHALL PROVIDE AT LEAST SIX (6) INCHES OF SPACE BEHIND THE WATER METER BOX TO THE RIGHT OF WAY LINE.

**ABBREVIATIONS**

OTHERS PER MAG STD DTL 110-2			
AC	ASPHALTIC CONCRETE	PC	POINT OF CURVATURE
ACSC	AC SURFACE COURSE	PT	POINT OF TANGENCY
AER	AERIAL	PVC	POINT OF VERTICAL CURVATURE
AP	ANGLE POINT	PVMT	PAVEMENT
BC	BRASS CAP	PVT	POINT OF VERTICAL TANGENCY
B/C	BACK OF CURB	RCBC	REINFORCED CONCRETE BOX CULVERT
BOL	BOLLARD / GUARD POST	RE	ROADWAY EASEMENT
BUR	BURIED	R/W	RIGHT OF WAY
COP	CITY OF PHOENIX	SCPR	SCUPPER
CLF	CHAN LINK FENCE	SD	STORM DRAIN
DE	DRAINAGE EASEMENT	SDMH	STORM DRAIN MANHOLE
DIA	DIAMETER	SGN	SIGN
DNGY	DOWN GUY	SLE	SLOPE EASEMENT
DTL	DETAIL	SS	SANITARY SEWER
EC	ELECTRICAL CABINET	SSMH	SANITARY SEWER MANHOLE
EE	ELECTRICAL EASEMENT	STD	STANDARD
EM	ELECTRICAL METER	STLT	STREET LIGHT
EMH	ELECTRICAL MANHOLE	S/W	SIDEWALK
EP	EDGE OF PAVEMENT	S/E	SIDEWALK EASEMENT
EPB	ELECTRICAL PULL BOX	TC	TOP OF CURB
F	FENCE	TCE	TEMPORARY CONSTRUCTION EASEMENT
F/B	FACE OF BARRIER	TE	TELEPHONE EASEMENT
F/C	FACE OF CURB	TMH	TELEPHONE MANHOLE
FO	FIBER OPTIC	T.N.	TOP OF NUT
G	GUTTER, GAS	TPED	TELEPHONE PEDESTAL
GM	GAS METER	TSC	TRAFFIC SIGNAL CABINET
GMK	GAS MARKER SIGN	TSPB	TRAFFIC SIGNAL PULL BOX
GRATE	STORM DRAIN GRATE	TVPB	TV PULL BOX
GV	GAS VALVE	UG	UNDERGROUND
HH	HANDHOLE	VNAE	VEHICULAR NON-ACCESS EASEMENT
IBX	IRRIGATION CONTROL BOX	WBV	WATER BLOW-OFF VALVE
ICV	IRRIGATION CONTROL VALVE	WE	WATER EASEMENT
L	LIP OF GUTTER	WM	WATER METER
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS	WMH	WATER MANHOLE
MCHD	MARICOPA COUNTY HIGHWAY DEPARTMENT	WV	WATER VALVE
ME	MATCH EXISTING		
M	MONUMENT LINE		
OHE	OVERHEAD ELECTRIC		
P	PAVEMENT ELEVATION		
POE	POINT OF ENDING		
PCC	PORTLAND CEMENT CONCRETE		



"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

**LEGEND, NOTES AND ABBREVIATIONS**  
**CITY OF PHOENIX, ARIZONA**  
 STREET TRANSPORTATION DEPARTMENT  
**THOMAS ROAD & INDIAN SCHOOL ROAD INTERSECTIONS**  
**ST89340584**

DR: SD	DES: GS	CK: CJ	SHEET NO:	TOTAL SHEETS
DATE:03/23	DATE:03/23	DATE:03/23	2	31
SCALE: N/A				

RAMP AND SIGNAL IMPROVEMENTS:  
 PHOENIX STREET – MARICOPA CO.  
 THOMAS RD & INDIAN SCHOOL RD

### WATER GENERAL NOTES

1. PLANNING & DEVELOPMENT DEPARTMENT'S CIVIL/SITE INSPECTION STAFF SHALL BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS TELEPHONE 602-262-7811.
2. ALL WATER VALVE BOXES SHALL BE PER THE CITY OF PHOENIX SUPPLEMENT TO MAG SPECIFICATIONS AND DETAILS, TYPE A ONLY.
3. ALL CONSTRUCTION IN CITY OF PHOENIX RIGHT-OF-WAY, OR EASEMENT, IS TO CONFORM TO MAG SPECIFICATIONS AND DETAILS AND CITY OF PHOENIX SUPPLEMENT TO MAG SPECIFICATIONS AND DETAILS, UNLESS MODIFIED ON THE PLANS.
4. ALL DUCTILE IRON PIPE WATER MAIN VALVES, FITTINGS, AND BENDS SHALL BE RESTRAINED. RESTRAINED JOINT REQUIREMENTS AND APPROVED RESTRAINING SYSTEM ARE SHOWN IN CITY OF PHOENIX SUPPLEMENT TO MAG SPECIFICATIONS, SECTION 750.3. THE LENGTH OF THE RESTRAINTS MUST BE PER MAG STANDARD DETAIL 303-1 AND 303-2. THRUST BLOCKS ARE NOT ALLOWED TO BE USED IN LIEU OF APPROVED RESTRAINED JOINT SYSTEMS. THRUST BLOCKS CAN BE USED IN ADDITION TO THE APPROVED RESTRAINED JOINT SYSTEMS WHERE A SPECIFIC CITY OF PHOENIX SUPPLEMENT TO MAG STANDARD DETAIL CALLS OUT FOR THRUST BLOCKING, SUCH AS CURRENT DETAILS, P1343, P1351, AND P1360 OR WHEN OTHERWISE APPROVED BY THE WATER SERVICES DEPARTMENT.
5. THE FOLLOWING MAG DETAILS ARE SPECIFICALLY NOT APPROVED:  
 302-1 JOINT RESTRAINT WITH TIE RODS  
 302-2 JOINT RESTRAINT WITH TIE RODS – ANCHOR BLOCKS  
 321 STANDARD WATER METER VAULT  
 345-1 3", 4", AND 6" WATER METER  
 345-2 4" AND 6" WATER METER WITH ON-SITE FIRE HYDRANTS  
 370 VERTICAL REALIGNMENT OF WATER MAINS  
 381 ANCHOR BLOCKS FOR VERTICAL BENDS  
 390 CURB STOP WITH FLUSHING PIPE  
 391-1 VALVE BOX INSTALLATION
6. COMPACTION SHALL COMPLY WITH MAG SECTION 601 AND CITY OF PHOENIX SUPPLEMENTS.
7. NEW WATER LINES ARE TO BE BUILT IN ACCORDANCE WITH THE CITY OF PHOENIX "STANDARD UTILITY LOCATIONS".
8. THIS SET OF PLANS HAS BEEN INITIALLY REVIEWED BY THE CITY OF PHOENIX. SUCH REVIEW IS PART OF THE PROCESS THAT DEVELOPER(S)/CONTRACTOR(S) MUST GO THROUGH IN ORDER TO OBTAIN A CONSTRUCTION PERMIT. THE RESULTS OF SUCH INITIAL REVIEW SHALL NOT DICTATE THE CITY OF PHOENIX'S FINAL DETERMINATION AS TO THE ACCEPTABILITY OF THE PLANS, NOT SHALL IT PREVENT THE CITY OF PHOENIX FROM REQUIRING ERRORS AND OMISSIONS, AS FOUND ON PLANS, BE ADDRESSED BY DEVELOPER(S)/CONTRACTOR(S), WHERE SUCH ERRORS AND OMISSIONS CAUSE THE PLANS TO BE IN VIOLATION OF OR INADEQUATE UNDER APPLICABLE FEDERAL/STATE/COUNTY/LOCAL CODES, ORDINANCES, REGULATIONS, OR OTHER LAWS. THIS REVIEWED AND STAMPED SET OF PLANS MUST BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.
9. PIPE DEFLECTION SHALL BE PER MANUFACTURERS' RECOMMENDATIONS.
10. ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE CURRENT CITY OF PHOENIX "TRAFFIC BARRICADE MANUAL".
11. THE CONTRACTOR IS TO NOTIFY THE PUBLIC THAT WILL BE AFFECTED BY THE SHUTDOWNS A MINIMUM OF 48 HOURS IN ADVANCE.
12. A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF UNDERGROUND UTILITY.
13. A ONE (1) FOOT MINIMUM VERTICAL SEPARATION FROM ANY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS AND WATER SERVICES. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF DRY UNDERGROUND UTILITY.
14. A TWO (2) FOOT MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY SEWER MAIN AND STORM DRAIN CROSSING A WATER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR STORM DRAIN MAIN. SEE MAG STANDARD DETAIL 404 FOR ADDITIONAL INFORMATION AND/OR PROVISIONS FOR CLEARANCE.
15. EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
16. ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
17. WATER SERVICES SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN. WATER SERVICES AT THE END OF CUL-DE-SACS MAY VARY AS NECESSARY, BUT WILL APPROVED ON A CASE BY CASE BASIS.
18. ALL SERVICES SHALL RUN IN A STRAIGHT LINE FROM THE WATER MAIN TO THE METER BOX.
19. NEITHER WATER SERVICE METER BOX NOR ANY PORTION OF A WATER SERVICE SHALL BE INSTALLED UNDER AN EXISTING OR PROPOSED DRIVEWAY OR SIDEWALK RAMP.
20. CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND PRIOR TO FINAL INSPECTION.
21. RECORD DRAWING SUBMITTALS MUST COMPLY PER THE WATER SERVICES DEPARTMENT ENGINEERING POLICY P-68. A COPY OF THE POLICY CAN BE OBTAINED IN THE DEPARTMENT'S WEBSITE:  
[HTTP://PHOENIX.GOV/WATERSERVICES/DESIGN/ENGPOLICIES/INDEX.HTML](http://PHOENIX.GOV/WATERSERVICES/DESIGN/ENGPOLICIES/INDEX.HTML)
22. IN ACCORDANCE WITH AAC R-18-4-213, ALL MATERIALS ADDED AFTER JANUARY 1, 1993 WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61.

### WATER GENERAL NOTES (CONT.)

23. PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED FOR THE CONSTRUCTION OF THE PUBLIC WORKS FACILITIES SHOWN HEREON. THE PROJECT OWNER, AND THE OWNER'S LENDERS, CONSULTANTS, CONTRACTORS AND SUBCONTRACTORS ARE PROHIBITED FROM DISCLOSING THE PLANS AND SPECIFICATIONS TO ANY PERSONS OTHER THAN THOSE WHO HAVE A NEED TO KNOW THE INFORMATION FOR THE PURPOSE OF THE PROJECT.
24. A PAVEMENT CUT SURCHARGE SHALL BE ASSESSED ON THIS PROJECT FOR ANY TRENCHING OR POTHOLING IN NEW ASPHALT PAVEMENT THAT IS LESS THAN 30 MONTHS OLD. SURCHARGE FEES ASSESSED ARE IN ADDITION TO THE REGULAR PERMIT FEES AND ARE OVER AND ABOVE ANY SPECIAL BACKFILL, COMPACTION, AND PAVEMENT REPLACEMENT STIPULATIONS THAT MAY BE IMPOSED AS A CONDITION OF PERMITTING. PAVEMENT CUT SURCHARGE FEES ARE ASSESSED IN ACCORDANCE WITH SECTION 31-38 OF THE PHOENIX CITY CODE.
25. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.
26. NEED TO PROVIDE POTHOLE DATA FOR THE EXISTING 54-INCH PCCP VERTICAL CLEARANCE VIA SOFT DIG METHODS.
27. THE PROPOSED CONDUIT CROSSES THE 54-INCH PRESTRESSED CONCRETE (CYLINDER PIPE) MAIN.

THE 54-INCH WATER LINE IS SENSITIVE AND CRITICAL TO THE CITY OF PHOENIX; THE FOLLOWING ARE A LIST OF REQUIREMENTS FOR DIGGING NEAR/AROUND OUR PIPE:

WHEN POTHOLES ARE PERFORMED AND TRENCHING OVER THE WATERLINE, USE A SOFT-DIG METHOD. A MINIMUM OF FOUR FEET OF VERTICAL SEPARATION, BETWEEN THE OUTSIDE DIAMETER OF PIPE AND CONCRETE CASING IS REQUIRED, WITH A MAXIMUM OF 6 INCH CONCRETE ENCASEMENT AROUND UTILITY LINES.

THIS PIPE WAS DESIGNED AND CALCULATED WITH A PORTION OF SOILS OUTSIDE PROVIDING SUPPORT AND STRENGTH TO THE PIPE. IF THIS ZONE IS DISTURBED THEN THE PIPE WILL LOSE INTEGRITY. ALL PARALLEL UTILITIES OR STRUCTURES MUST MAINTAIN A 10 FEET HORIZONTAL DISTANCE FROM THE OUTSIDE DIAMETER OF THE WATER LINE.

DO NOT ADD ADDITIONAL LOADS (EMBANKMENT/FILL/SPOILS) ABOVE THE MAIN OR PLACE HEAVY EQUIPMENT (CRANES, LARGE EXCAVATORS, SCRAPERS, ETC.) OVER THE PIPE BECAUSE THIS MAY OVERBURDEN THE PIPE, PARTICULARLY IN NON-PAVED AREAS. IF POSSIBLE, THE PIPE ALIGNMENT SHOULD BE ROPED OFF TO PREVENT ACCESS IN THE CONSTRUCTION ZONE.

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340584	3	31
			1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034		
DR:SD	DES:GS	CK:CJ			
DATE:03/23	DATE:03/23	DATE:03/23			

REVISION BY CITY OF PHOENIX		REV BY/CHK BY	DATE			
DESCRIPTION						
NO.						
REVISION BY CITY OF PHOENIX		REV BY/CHK BY	DATE			
DESCRIPTION						
NO.						
REVISION BY CITY OF PHOENIX		REV BY/CHK BY	DATE			
DESCRIPTION						
NO.						

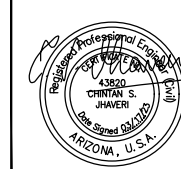


"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

**WATER GENERAL NOTES**  
 CITY OF PHOENIX, ARIZONA  
 STREET TRANSPORTATION DEPARTMENT  
 THOMAS ROAD & INDIAN SCHOOL  
 ROAD INTERSECTIONS  
 ST89340584

DR: SD	DES: GS	CK: CJ	SHEET	TOTAL
DATE:03/23	DATE:03/23	DATE:03/23	NO:	SHEETS
SCALE: N/A			3	31

RAMP AND SIGNAL IMPROVEMENTS:  
PHOENIX STREET - MARICOPA CO.  
THOMAS RD & INDIAN SCHOOL RD



F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	4	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR:SD	DES:GS	CK:CJ
DATE:03/23	DATE:03/23	DATE:03/23

APPROXIMATE PROJECT QUANTITIES

ITEM	BID NO.	DESCRIPTION	UNIT	51ST & INDIAN SCHOOL	67TH & INDIAN SCHOOL	71ST & THOMAS	75TH & THOMAS	QUANTITY
1	E699200	ALLOWANCE FOR STORMWATER POLLUTION PREVENTION BEST MANAGEMENT PRACTICE (BMP'S)	JOB	—	—	—	—	1
2	M1042006	ALLOWANCE FOR UNFORESEEN CONDITIONS	JOB	—	—	—	—	1
3	M1058001	CONSTRUCTION SURVEYING AND LAYOUT	LS	—	—	—	—	1
4	M3360120	ASPHALT CONCRETE FOR PERMANENT PAVEMENT REPLACEMENT, TYPE D-1/2, 2" THICK	SY	124	62	95	94	375
5	M3360260	ASPHALT CONCRETE FOR PERMANENT PAVEMENT REPLACEMENT, TYPE C-3/4, 6" THICK	SY	124	62	95	94	375
6	M3370103	CRACK SEAL AND MICROSEAL	SY	3483	2890	2484	3874	12,731
7	M3400000	CONSTRUCT CONCRETE MEDIAN NOSE TRANSITION PER MAG STD DTL 223	SF	86	—	138	95	319
8	M3400400	CONSTRUCT CONCRETE SIDEWALK PER COP STD DTL P1230 (4" THICK)	SF	96	—	—	51	147
9	M3400409	CONSTRUCT CONCRETE SIDEWALK PER COP STD DTL P1230 MODIFIED (9" THICK), CLASS A CONCRETE	SF	164	409	247	140	960
10	M3400415	TRUNCATED DOMES FOR SIDEWALK RAMPS, PER COP STD. DTL. P1232	SF	84	88	96	89	357
11	M3400488A	CONCRETE CURB RAMP, (9" THICK) (CONSTRUCT CONCRETE CURB RAMP PER MAG STD DTL 236-4, (9" THICK))	SF	502	874	1898	932	4206
12	M3400488B	CONCRETE CURB RAMP, (9" THICK) (CONSTRUCT CONCRETE CURB RAMP PER MAG STD DTL 237-1, (9" THICK))	SF	1570	1268	—	1289	4127
13	M3402201	CONSTRUCT CONCRETE CURB AND GUTTER PER MAG STD DTL 220-1, TYPE "A"	LF	217	241	260	236	954
14	M3402227	CONSTRUCT CONCRETE CURB AND GUTTER PER MAG STD DTL 220-1, TYPE "A" MODIFIED (FOR BUS BAYS)	LF	20	—	—	11	31
15	M3450040	ADJUST EXISTING GAS VALVE BOX AND COVER TO GRADE PER MAG 345	EA	—	1	—	—	1
16	M3453001	ADJUST EXISTING WATER VALVE FRAME AND COVER PER COP STD DTL P1391, TYPE 'A' ONLY	EA	1	2	—	—	3
17	M3500010	REMOVE EXISTING CONCRETE CURB AND GUTTER	LF	237	241	260	247	985
18	M3500020	REMOVE EXISTING CONCRETE SIDEWALK AND MEDIAN NOSE	SF	1884	1387	1903	1410	6,584
19	M3500036	REMOVE EXISTING CONCRETE CATCH BASIN	EA	2	—	—	—	2
20	M3500040	REMOVE EXISTING 6" WATER PIPE	LF	13	—	31	27	71
21	M3500312	MISCELLANEOUS REMOVALS AND OTHER WORK	LS	—	—	—	—	1
22	M3513110	1" PVC CONDUIT FOR TRAFFIC SIGNALS	LF	34	7	34	8	83
23	M3513303	TRAFFIC SIGNAL CONDUCTORS	LS	—	—	—	—	1
24	M3515046	RELOCATE EXISTING ELECTRIC JUNCTION BOX	EA	4	—	—	—	4
25	M4011903	TRAFFIC CONTROL DEVICES	LS	—	—	—	—	1
26	M4013000	ALLOWANCE FOR UNIFORMED, OFF-DUTY LAW ENFORCEMENT OFFICER	JOB	—	—	—	—	1
27	M4404000A	REMOVE EXISTING IRRIGATION BOX AND REPLACE WITH NEW HEAVY DUTY BOX IN SIDEWALK	EA	—	—	3	—	3
28	M4711001	2" SCH 40 PVC CONDUIT	LF	9	38	75	75	198
29	M4711003	2 1/2" SCH 40 PVC CONDUIT	LF	1507	1443	1185	1811	5,946
30	M4712003	TRAFFIC SIGNAL, NO. 7 JUNCTION BOX	EA	4	4	4	4	16
31	M4722001A	FOUNDATION FOR TYPE BP POLE IN SIDEWALK	EA	2	—	—	1	3
32	M4722004A	FOUNDATION FOR TYPE AP POLE	EA	—	—	2	—	2
33	M4722007A	FOUNDATION FOR TYPE GP POLE	EA	2	1	1	2	6
34	M4722010A	FOUNDATION FOR TYPE LP POLE	EA	2	3	1	2	8
35	M4722013A	FOUNDATION FOR TYPE P45 POLE	EA	—	2	2	—	4
36	M4722016A	FOUNDATION FOR TYPE P70 POLE	EA	4	2	2	4	12
37	M4724002	FOUNDATION FOR BATTERY BACKUP POWER PEDESTAL TYPE B	EA	1	1	1	1	4
38	M4724004	FOUNDATION FOR CONTROLLER CABINET	EA	1	1	1	1	4
39	M4732002	APS PEDESTRIAN PUSH BUTTON	EA	8	8	8	8	32
40	M3515072A	REMOVE EXISTING LUMINAIRE AND MAST ARM AND DISPOSE (REMOVE EXISTING MAST ARM)	EA	4	4	4	4	16
41	M4791000	REMOVAL OF SIGNAL POLE	EA	9	7	7	10	33
42	M4733001	EVP DETECTOR AND CONFIRMATION LIGHT	EA	2	2	2	2	8
43	M4741020	COP LUMINAIRE MAST ARM	EA	6	5	7	6	24
44	M4741024	5' RISER WITH SINGLE LUMINAIRE MAST ARM SHOE	EA	5	6	4	5	20
45	M4741030	20' RISER WITH SINGLE LUMINAIRE MAST ARM SHOE	EA	1	1	1	1	4
46	M4741035	TYPE AP POLE - 20'	EA	—	—	2	—	2
47	M4741036	TYPE BP POLE - 4'	EA	2	—	—	1	3
48	M4741037A	TYPE GP POLE (TYPE GP POLE WITH LUMINAIRE ARM)	EA	2	1	1	2	6
49	M4741038	TYPE LP POLE	EA	2	3	1	2	8
50	M4741039	TYPE P45 POLE	EA	—	2	2	—	4
51	M4741041	TYPE P70 POLE	EA	4	2	2	4	12
52	M4741044	30' PRIMARY MAST ARM FOR P45 POLE (M30P45)	EA	—	1	2	—	3

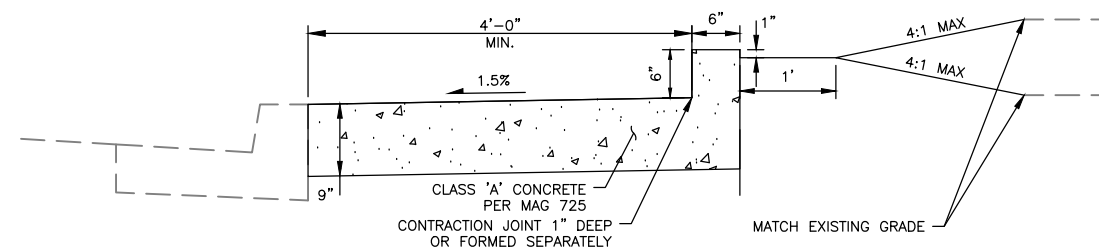
APPROXIMATE PROJECT QUANTITIES (CONTINUED)

ITEM	BID NO.	DESCRIPTION	UNIT	51ST & INDIAN SCHOOL	67TH & INDIAN SCHOOL	71ST & THOMAS	75TH & THOMAS	QUANTITY
53	M4741047	40' PRIMARY MAST ARM FOR P70 POLE (M40P70)	EA	1	2	1	—	4
54	M4741048	55' PRIMARY MAST ARM FOR P70 POLE (M55P70)	EA	3	1	1	4	9
55	M4741050	5' MAST ARM EXTENSION FOR P45/P70 POLE	EA	2	3	2	3	10
56	M4741051	10' MAST ARM EXTENSION FOR P45/P70 POLE	EA	1	1	1	1	4
57	M4741053	DAMPER	EA	4	4	4	4	16
58	M4751002	TYPE 'B' ELECTRICAL POWER SERVICE PEDESTAL	EA	1	1	1	1	4
59	M4751003	TRAFFIC SIGNAL CONTROLLER CABINET	EA	1	1	1	1	4
60	M4761001	TYPE F- 3 SECTION 12" SIGNAL HEAD	EA	4	4	4	4	16
61	M4761002	TYPE F1- 3 SECTION 12" SIGNAL HEAD	EA	10	11	10	12	43
62	M4761009	PEDESTRIAN HEAD, LED	EA	8	8	8	8	32
63	M4761012	TYPE FA- 4 SECTION 12" SIGNAL HEAD	EA	4	4	4	4	16
64	M4761013	TYPE FA1- 4 SECTION 12" SIGNAL HEAD	EA	4	4	4	4	16
65	M4771001	LED TRAFFIC SIGNAL LUMINAIRE	EA	8	8	6	8	30
66	M4793001A	REMOVAL OF FOUNDATIONS (REMOVE EXISTING 'A' POLE FOUNDATION, FULL DEPTH, PER COP TRAFFIC SPEC 479.2.4)	EA	7	4	4	8	23
67	M4793001B	REMOVAL OF FOUNDATIONS (REMOVE EXISTING FOUNDATION A MINIMUM OF 10" BELOW FINISHED GRADE PER COP TRAFFIC SPEC 479.2.4)	EA	2	2	3	2	9
68	M4793001C	REMOVAL OF FOUNDATIONS (REMOVE EXISTING FOUNDATION, FULL DEPTH, PER COP TRAFFIC SPEC 479.2.4)	EA	—	1	—	—	1
69	M4794001	MISCELLANEOUS REMOVAL OF INCIDENTAL TRAFFIC ITEMS	LS	—	—	—	—	1
70	M5051508	CONCRETE CATCH BASIN, TYPE "H", DOUBLE GRATE, M.A.G. DETAIL 538 AND 539 (CONSTRUCT CONCRETE CATCH BASIN TYPE 'H' (SINGLE GRATE PER MAG STD DTL 538))	EA	1	—	—	—	1
71	M5051565	CONCRETE CATCH BASIN, TYPE "N, SINGLE", PHX. SUPP. DETAIL P-1570	EA	1	—	—	—	1
72	M6101850	ALLOWANCE FOR EXCESS DUCTILE IRON FITTINGS, FURNISH AND INSTALL	JOB	—	—	—	—	1
73	M6104400	WATER LINE CUT-OUT PER COP STD DTL P1344	EA	1	—	1	1	3
74	M6105006	FURNISH AND INSTALL NEW 6" DUCTILE IRON PIPE AND FITTINGS PER COP SUPPLEMENT TO MAG SPEC SECTION	LF	15	5	33	26	79
75	M6106000A	REMOVE EXISTING VALVE, BOX, AND COVER, BACKFILL WITH ABC, REPLACE PAVEMENT. DELIVER SALVAGED ITEMS TO WATER YARD (REMOVE EXISTING WATER VALVE, BOX AND COVER)	EA	1	—	1	1	3
76	M6106003	REMOVE EXISTING FIRE HYDRANT AND SALVAGE TO CITY OF PHOENIX	EA	2	1	1	2	6
77	M6108014A	FIRE HYDRANT ASSEMBLY, 6" GATE VALVE, VALVE BOX & COVER, TYPE "A", FURNISH AND INSTALL (INSTALL NEW FIRE HYDRANT PER COP STD DTL P1360 & P1362)	EA	2	1	1	2	6
78	M6180024	INSTALL NEW 24" RGRCP CLASS III STORM DRAIN	LF	8	—	—	—	8
79	M6180506	CONCRETE PIPE COLLAR FOR 24" PIPE AND LARGER, COP STANDARD DTL P-1505	EA	1	—	—	—	1
80	M6304025	FURNISH & INSTALL 8"x6" TAPPING SLEEVE & VALVE, BOX & COVER	EA	1	—	1	1	3
81	M6309065	DEBRIS CAP, INCLUDING LOCATOR COIL, INSTALL	EA	5	4	3	3	15
82	M9001002	20"x8" DOUBLE-SIDED ILLUMINATED STREET SIGN	EA	2	2	4	4	12
83	M9003002	36"x8" DOUBLE-SIDED ILLUMINATED STREET SIGN	EA	2	2	—	—	4
84	M9011001	WIRELESS NETWORK RADIO	EA	1	1	1	1	4
85	M4733004	NON-INTRUSIVE DETECTION SYSTEM FOR 4-LEGGED INTERSECTION	EA	1	1	1	1	4
86	M9021001	PTZ CCTV CAMERA	EA	1	1	1	1	4

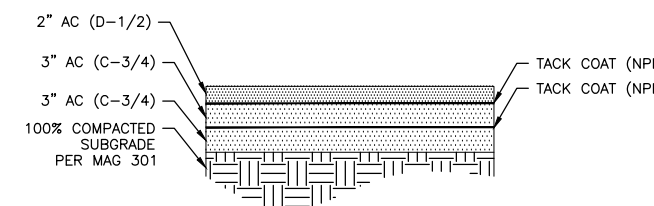
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY/CHK BY	DATE
NO.			

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NO.			

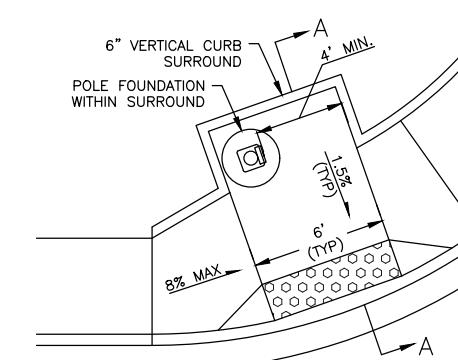
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY/CHK BY	DATE
NO.			



SECTION A-A  
SCALE: NTS



STRUCTURAL SECTION NO. 1  
(USE FOR BIDDING PURPOSES ONLY, MATCH EXISTING PAVEMENT SECTION FOR CONSTRUCTION)



RAMP DETAIL NO. 1  
SCALE: NTS



"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

QUANTITY SUMMARY & DETAILS				
CITY OF PHOENIX, ARIZONA				
STREET TRANSPORTATION DEPARTMENT				
THOMAS ROAD & INDIAN SCHOOL ROAD INTERSECTIONS				
ST89340584				

DR: SD	DES: GS	CK: CJ	SHEET NO:	TOTAL SHEETS
DATE: 03/23	DATE: 03/23	DATE: 03/23	4	31
SCALE: N/A				





RAMP AND SIGNAL IMPROVEMENTS:  
PHOENIX STREET – MARICOPA CO.  
THOMAS RD & INDIAN SCHOOL RD

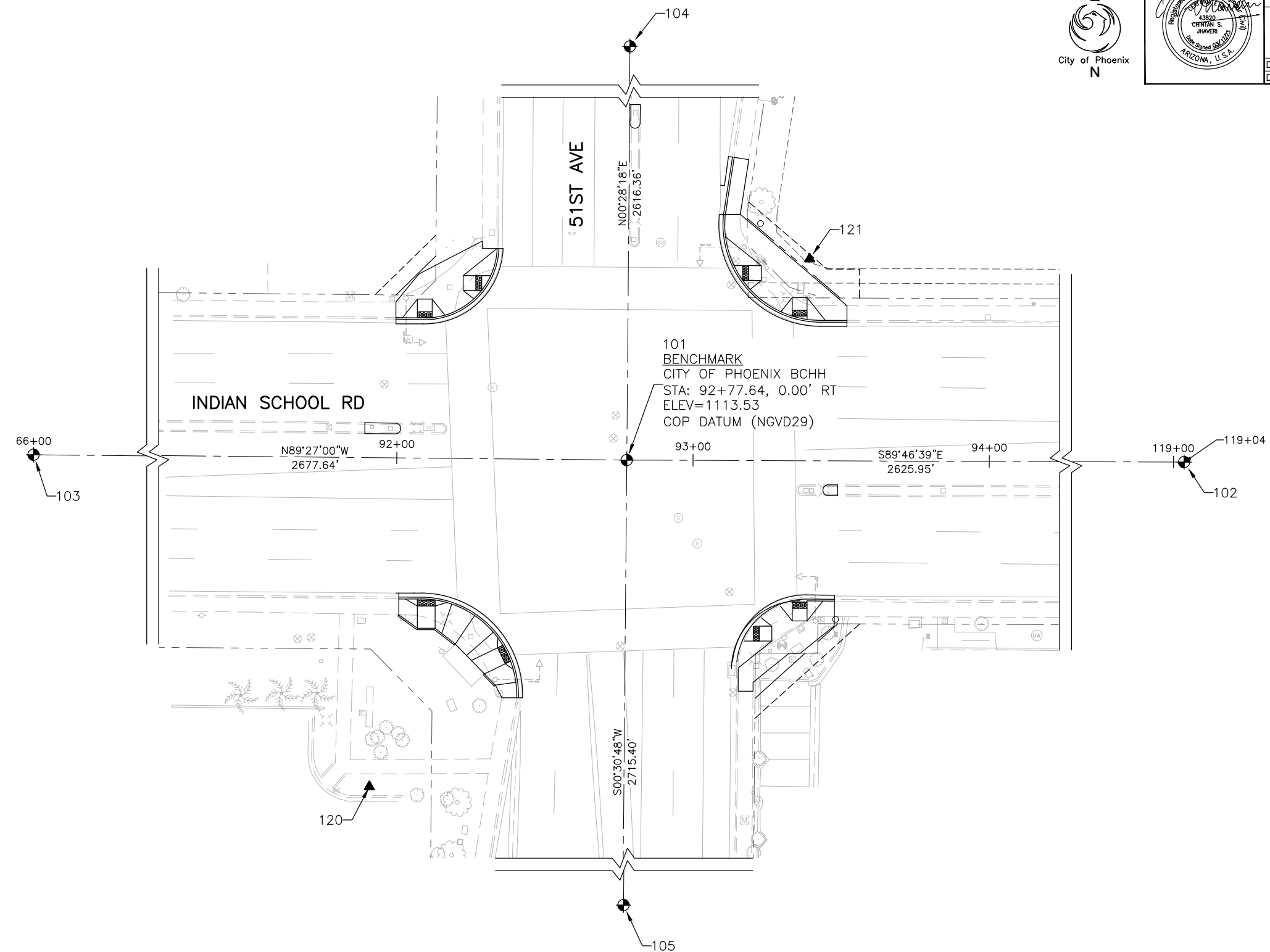


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	6	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR:SD	DES:GS	CK:CJ
DATE:03/23	DATE:03/23	DATE:03/23

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



**PRIMARY BENCHMARK**  
#101 COP BRASS CAP IN HAND HOLE AT THE INTERSECTION OF 51ST AVE & INDIAN SCHOOL RD  
ELEV=1113.529 COP DATUM (HELD)

**SECONDARY BENCHMARK**  
#103 COP BRASS CAP IN HAND HOLE AT THE INTERSECTION OF 55TH AVE & INDIAN SCHOOL RD  
ELEV=1109.18 (1109.04 OBSERVED)

ALL DESIGN IN THESE PLANS IS BASED ON TOPOGRAPHIC SURVEY COMPLETED IN APRIL 2019.

SURVEY CONTROL				
POINT #	DESCRIPTION	NORTHING	EASTING	ELEVATION
101	FOUND BRASS CAP IN HAND HOLE, NE CORNER OF SECTION 29, T.2N., R.2E.	907832.99	623202.30	1113.53'
102	FOUND BRASS CAP IN HAND HOLE, N 1/4 CORNER OF SECTION 28, T.2N., R.2E	907822.79	625828.23	1114.68'
103	FOUND BRASS CAP IN HAND HOLE, N 1/4 CORNER OF SECTION 29, T.2N., R.2E	907858.70	620524.78	1109.04'
104	FOUND BRASS CAP IN HAND HOLE, W 1/4 CORNER OF SECTION 21, T.2N., R.2E	910449.26	623223.84	1121.77'
105	FOUND BRASS CAP FLUSH, E 1/4 CORNER OF SECTION 29, T.2N., R.2E	905117.70	623177.98	1101.62'

TEMPORARY BENCHMARKS				
POINT #	DESCRIPTION	NORTHING	EASTING	ELEVATION
120	SET NAIL	907722.71	623115.40	1113.36'
121	SET NAIL	907900.90	623264.02	1112.73'

0 20' 40'

SCALE: 1" = 20'

Contact Arizona 811 at least two full working days before you begin excavation

**ARIZONA 811**  
Call 811 or click Arizona811.com

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

**SURVEY CONTROL PLAN**

**CITY OF PHOENIX, ARIZONA**  
STREET TRANSPORTATION DEPARTMENT

**51ST AVE & INDIAN SCHOOL RD**  
ST89340584

DR:SD	DES:GS	CK:CJ	SHEET	TOTAL
DATE:03/23	DATE:03/23	DATE:03/23	NO:	SHEETS
SCALE: 1"=20'			6	31



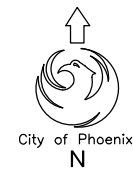








RAMP AND SIGNAL IMPROVEMENTS:  
PHOENIX STREET - MARICOPA CO.  
THOMAS RD & INDIAN SCHOOL RD

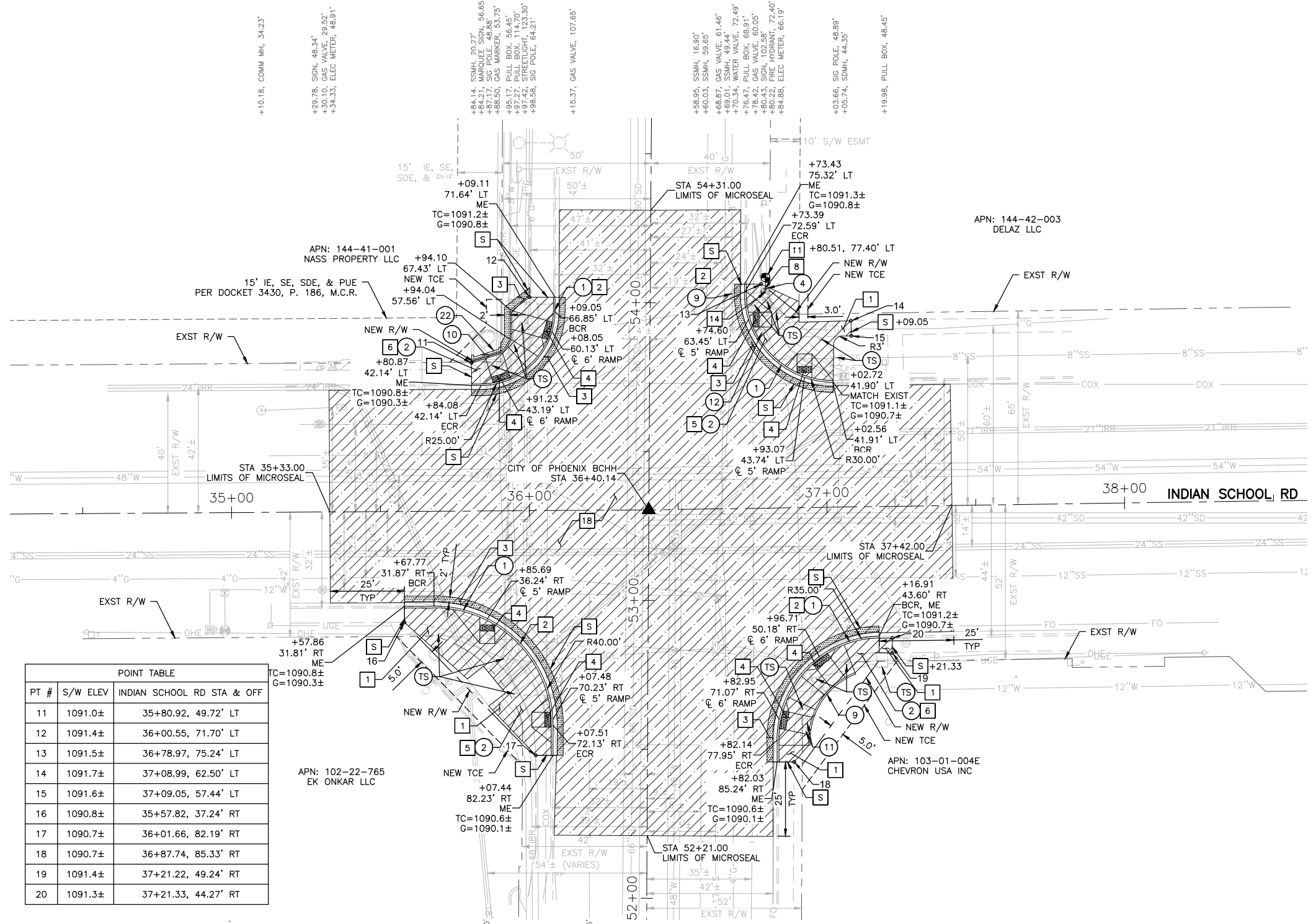


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	11	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SD DES: GS CK: CJ  
DATE: 03/23 DATE: 03/23 DATE: 03/23

NO.	DESCRIPTION	REV BY	CHK BY	DATE



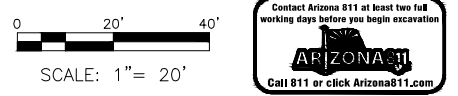
PT #	S/W ELEV	INDIAN SCHOOL RD STA & OFF
11	1091.0±	35+80.92, 49.72' LT
12	1091.4±	36+00.55, 71.70' LT
13	1091.5±	36+78.97, 75.24' LT
14	1091.7±	37+08.99, 62.50' LT
15	1091.6±	37+09.05, 57.44' LT
16	1090.8±	35+57.82, 37.24' RT
17	1090.7±	36+01.66, 82.19' RT
18	1090.7±	36+87.74, 85.33' RT
19	1091.4±	37+21.22, 49.24' RT
20	1091.3±	37+21.33, 44.27' RT

NO.	DESCRIPTION	UNIT	QTY
(TS)	SEE TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL RELATED WORK	-	-
(1)	REMOVE EXISTING CONCRETE CURB AND GUTTER	LF	241
(2)	REMOVE EXISTING CONCRETE SIDEWALK	SF	1,387
(4)	REMOVE EXISTING FIRE HYDRANT ASSEMBLY AND SALVAGE TO CITY	EA	1
(9)	ADJUST EXISTING WATER VALVE FRAME AND COVER PER COP STD DTL P1391, TYPE A	EA	2
(12)	ADJUST EXISTING GAS VALVE BOX AND COVER TO GRADE PER MAG 345	EA	1

NO.	DESCRIPTION	UNIT	QTY
(1)	CONSTRUCT CONCRETE SIDEWALK PER COP STD DTL P1230 (9" THICK)	SF	409
(2)	CONSTRUCT CONCRETE CURB AND GUTTER PER MAG STD DTL 220-1, TYPE A	LF	241
(3)	CONSTRUCT ASPHALT CONCRETE FOR PERMANENT PAVEMENT REPLACEMENT PER STRUCTURAL SECTION NO. 1, SHEET 3 AND MAG 336 AND COP SUPPLEMENTS	SY	63
(4)	INSTALL TRUNCATED DOMES PER COP STD DTL P1232	SF	88
(5)	CONSTRUCT CONCRETE CURB RAMP PER MAG STD DTL 237-1, 9" THICK	SF	1268
(6)	CONSTRUCT CONCRETE CURB RAMP PER MAG STD DTL 236-4, 9" THICK	SF	874
(8)	INSTALL NEW 6" DIP, CLASS 350, POLYETHYLENE WRAP, PER COP SUPPLEMENT TO MAG SPECS SECTION 750.2 AND MAG SPECS SECTION 610.6.2 & 610.6.3	LF	5
(11)	INSTALL NEW FIRE HYDRANT PER COP STD DTL P1360 & P1362 WITH RESTRAINED JOINTS, NO THRUST BLOCKS	EA	1
(14)	INSTALL 6" 90 DEG DIP BEND, CLASS 350, POLYETHYLENE WRAP, PER COP SUPPLEMENT TO MAG SPECS SECTION 750.2 AND MAG SPECS SECTION 610.6.2 & 610.6.3	EA	1
(18)	APPLY CRACK SEAL AND MICROSURFACE TREATMENT PER MAG 331 AND COP STREET PAVEMENT CUT POLICY	SY	2,890

NO.	DESCRIPTION	UNIT	QTY
(10)	REMOVE PORTION OF EXISTING MASONRY WALL AND RECONSTRUCT AT BACK OF NEW CONCRETE. CONSTRUCTION OF NEW WALL, INCLUDING MATERIAL, COLOR, AND FINISH, TO MATCH IN KIND	EA	1

NO.	DESCRIPTION	UNIT	QTY
(11)	RELOCATE EXISTING TELEPHONE RISER AND JUNCTION BOX	JOB	1
(22)	RELOCATE EXISTING GAS LINE MARKER	EA	1



"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

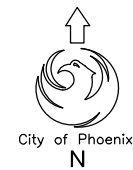
**RAMP IMPROVEMENT PLAN**  
**CITY OF PHOENIX, ARIZONA**  
STREET TRANSPORTATION DEPARTMENT  
**67TH AVE & INDIAN SCHOOL RD**  
**ST89340584**

DR: SD	DES: GS	CK: CJ	SHEET NO:	TOTAL SHEETS:
DATE: 03/23	DATE: 03/23	DATE: 03/23	11	31

SCALE: 1"=20'

▲ B.M.: BRASS CAP IN HAND HOLE, STA 36+40.14, 0.00' RT, ELEVATION 1090.91' COP DATUM (NGVD29)

RAMP AND SIGNAL IMPROVEMENTS:  
PHOENIX STREET - MARICOPA CO.  
THOMAS RD & INDIAN SCHOOL RD

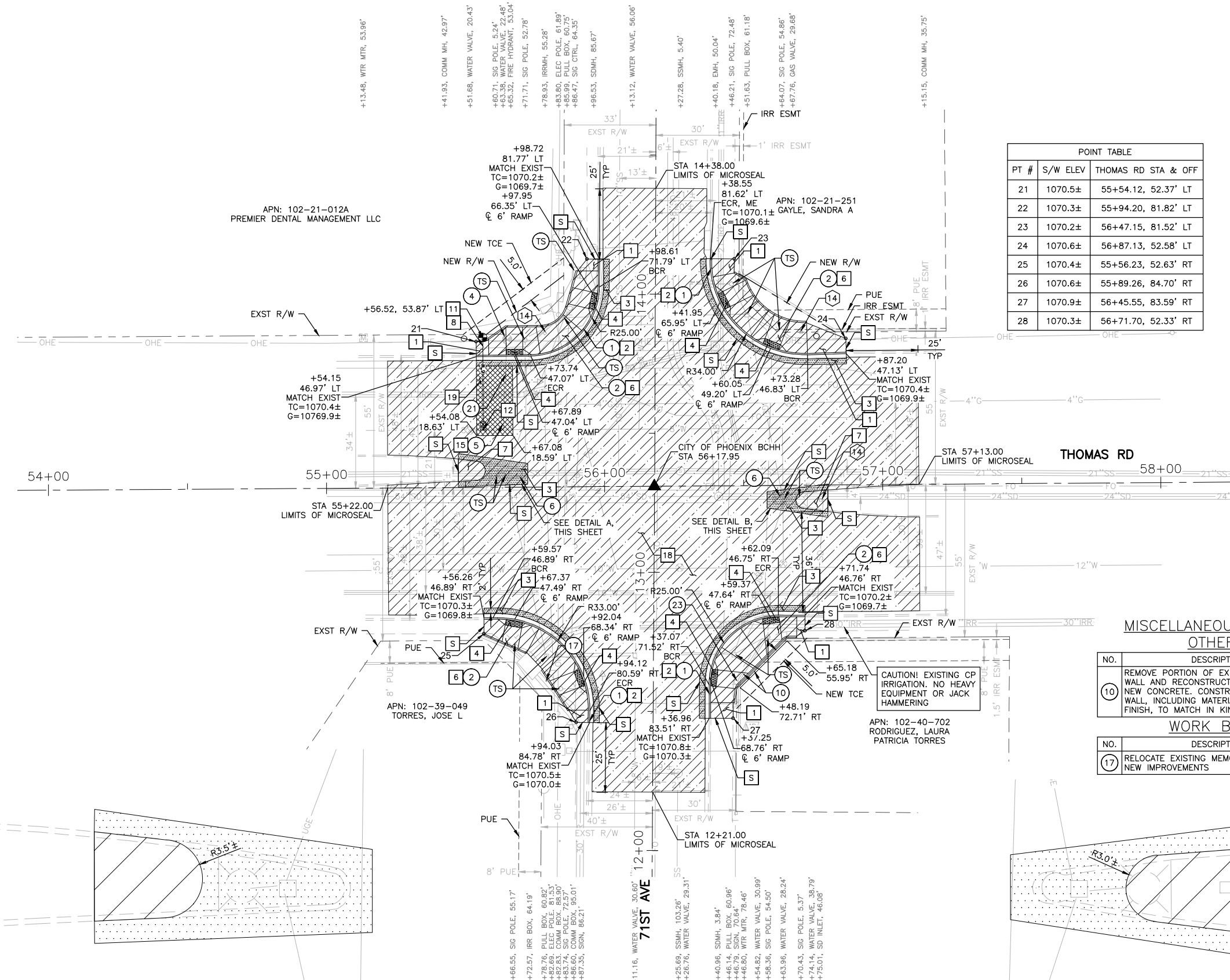


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	12	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR:SD DES:GS CK:CJ  
DATE:03/23 DATE:03/23 DATE:03/23

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				
NO.				
NO.				
NO.				



POINT TABLE

PT #	S/W ELEV	THOMAS RD STA & OFF
21	1070.5±	55+54.12, 52.37' LT
22	1070.3±	55+94.20, 81.82' LT
23	1070.2±	56+47.15, 81.52' LT
24	1070.6±	56+87.13, 52.58' LT
25	1070.4±	55+56.23, 52.63' RT
26	1070.6±	55+89.26, 84.70' RT
27	1070.9±	56+45.55, 83.59' RT
28	1070.3±	56+71.70, 52.33' RT

ADJUSTMENT/REMOVAL NOTES

NO.	DESCRIPTION	UNIT	QTY
(TS)	SEE TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL RELATED WORK	-	-
(1)	REMOVE EXISTING CONCRETE CURB AND GUTTER	LF	260
(2)	REMOVE EXISTING CONCRETE SIDEWALK	SF	1,662
(4)	REMOVE EXISTING FIRE HYDRANT ASSEMBLY AND SALVAGE TO CITY	EA	1
(5)	REMOVE EXISTING WATER VALVE, BOX, AND COVER	EA	1
(6)	REMOVE EXISTING CONCRETE MEDIAN NOSE	SF	241
(21)	REMOVE EXISTING 6" WATER PIPE	LF	31
(23)	REMOVE EXISTING SIGN	EA	1

CONSTRUCTION NOTES

NO.	DESCRIPTION	UNIT	QTY
(1)	CONSTRUCT CONCRETE SIDEWALK PER COP STD DTL P1230 (9" THICK)	SF	247
(2)	CONSTRUCT CONCRETE CURB AND GUTTER PER MAG STD DTL 220-1, TYPE A	LF	260
(3)	CONSTRUCT ASPHALT CONCRETE FOR PERMANENT PAVEMENT REPLACEMENT PER STRUCTURAL SECTION NO. 1, SHEET 3 AND MAG 336 AND COP SUPPLEMENTS	SY	95
(4)	INSTALL TRUNCATED DOMES PER COP STD DTL P1232	SF	96
(6)	CONSTRUCT CONCRETE CURB RAMP PER MAG STD DTL 236-4, 9" THICK	SF	1898
(7)	CONSTRUCT MEDIAN NOSE TRANSITION PER MAG STD DTL 223	SF	138
(8)	INSTALL NEW 6" DIP, CLASS 350, POLYETHYLENE WRAP, PER COP SUPPLEMENT TO MAG SPECS SECTION 750.2 AND MAG SPECS SECTION 610.6.2 & 610.6.3	LF	33
(11)	INSTALL NEW FIRE HYDRANT PER COP STD DTLS P1360 & P1362 WITH RESTRAINED JOINTS, NO THRUST BLOCKS	EA	1
(12)	INSTALL NEW 8"x6" TAPPING SLEEVE & VALVE, BOX AND COVER PER MAG STD DTL 340	EA	1
(15)	INSTALL WATER LINE CUT OUT PER COP STD DTL P1344	EA	1
(18)	APPLY CRACK SEAL AND MICROSURFACE TREATMENT PER MAG 331 AND COP STREET PAVEMENT CUT POLICY	SY	2,484
(19)	CONSTRUCT "T" TOP TRENCH REPAIR PER MAG STD DTL 200-1	NPI	-

IRRIGATION NOTES

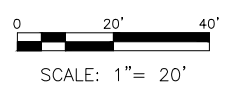
NO.	DESCRIPTION	UNIT	QTY
(14)	REPLACE EXISTING IRRIGATION BOX WITH NEW HEAVY DUTY BOX PER SPECIAL PROVISIONS, LEVEL IN SIDEWALK CONCRETE	EA	3

MISCELLANEOUS REMOVALS & OTHER WORK

NO.	DESCRIPTION	UNIT	QTY
(10)	REMOVE PORTION OF EXISTING MASONRY WALL AND RECONSTRUCT AT BACK OF NEW CONCRETE. CONSTRUCTION OF NEW WALL, INCLUDING MATERIAL, COLOR, AND FINISH, TO MATCH IN KIND	EA	1

WORK BY OTHERS

NO.	DESCRIPTION	UNIT	QTY
(17)	RELOCATE EXISTING MEMORIAL OUTSIDE NEW IMPROVEMENTS	EA	1



"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

RAMP IMPROVEMENT PLAN  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

71ST AVE & THOMAS RD  
ST89340584

DR: SD	DES: GS	CK: CJ	SHEET NO:	TOTAL SHEETS
DATE: 03/23	DATE: 03/23	DATE: 03/23	12	31

SCALE: 1"=20'

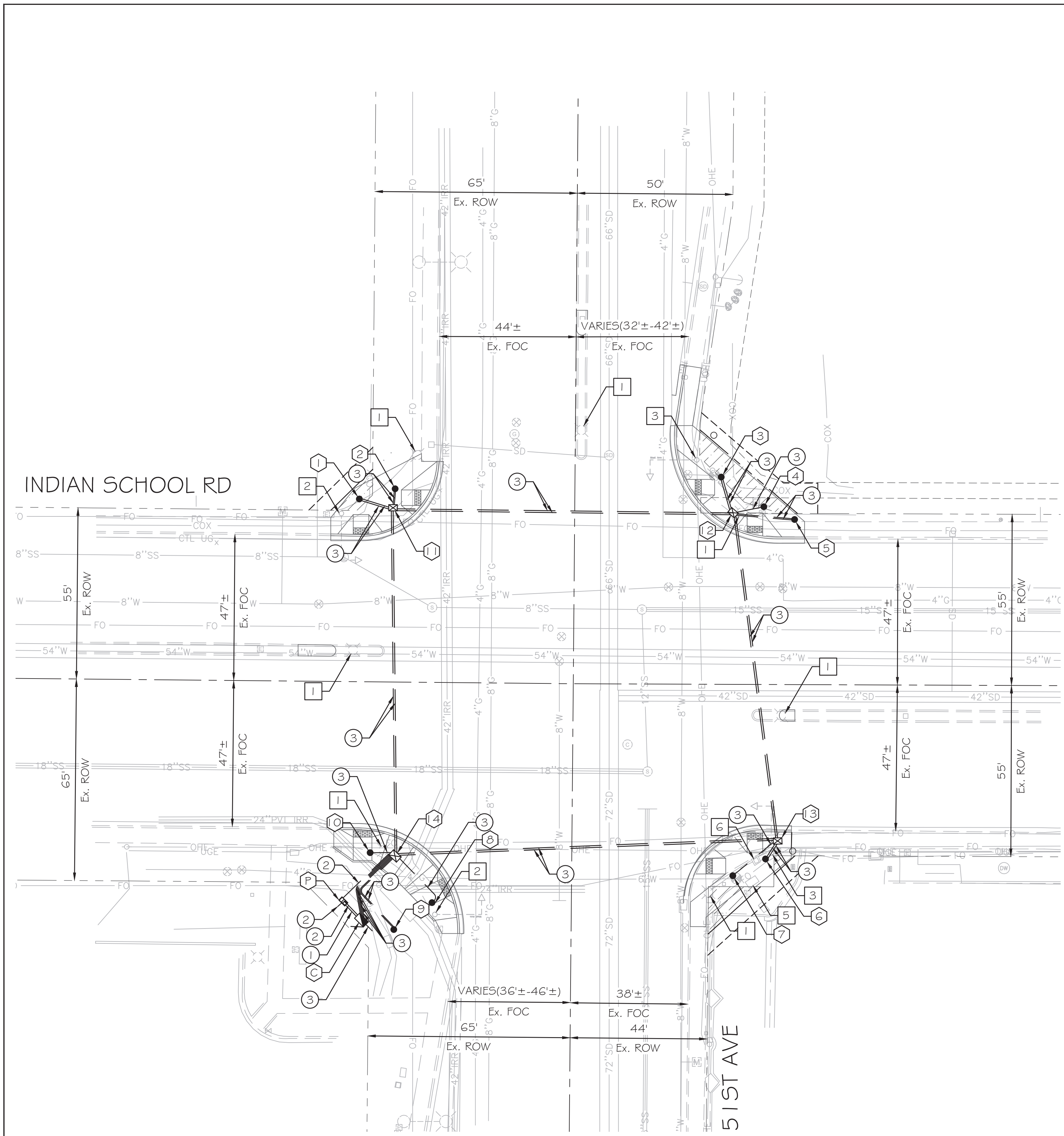
MEDIAN NOSE STAKING DETAIL A

▲ B.M.: BRASS CAP IN HAND HOLE, STA 56+17.95, 0.00' RT, ELEVATION 1070.438' COP DATUM (NGVD29)

MEDIAN NOSE STAKING DETAIL B







1. GENERAL NOTES:
- 1.1 The contractor shall notify the City of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to ordering any traffic signal equipment. The contractor shall verify they have the current approved plan set prior to starting and ordering of any equipment.
  - 1.2 The contractor shall layout all ADA ramps, junction boxes and foundation locations for approval by a traffic signal representative. Contractor must have a current visible Bluestake showing all utilities. All ADA ramps shall be laid out in white marking paint to determine best traffic signal pole locations.
  - 1.3 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not been begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director of Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.
  - 1.4 All traffic signal equipment and materials shall follow the current City of Phoenix Traffic Signal Standard Details and Specifications ([www.phoenix.gov/streets/reference-material](http://www.phoenix.gov/streets/reference-material)). The contractor shall have a copy of these standards along with a complete set of approved plans on site at all times during signal and lighting systems construction. The contractor shall have a competent supervisor capable of reading and understanding plans and specifications and thoroughly experienced in the construction of traffic signals. The contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. It will be the responsibility of the contractor to supply verification of certification. If a jobsite is inspected and a certified Electrician is not on site, a stop work order will be issued.
  - 1.5 The contractor is responsible for the construction of the project; its planning, safety, quality and completion. The City of Phoenix inspection team would make the determination if the work performed meets the criteria and if not, may request that the work be redone at the contractor's expense.
  - 1.6 Foundation elevations must be within 1/4" of finished sidewalk grade.
  - 1.7 A minimum of a four (4) foot clear path is required around all traffic signal poles. A four by four (4x4) flat landing centered on the pedestrian push button must be maintained as provided on the Traffic Signal Standard Details (see note 1.4).
  - 1.8 Contractor shall verify location and orientation of all pole and mast arm mounted equipment on all new traffic signal poles and mast arms with the Traffic Signal shop's representative prior to drilling any holes in the poles or mast arms. Failure to get approval may result in replacement of the pole at the contractor's expense.

2. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS
- The contractor shall supply all materials and perform all work except as indicated in note 3.
3. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

Traffic Signal representative shall approve marked layout of ADA ramps, junction boxes and foundation locations prior to excavation, prep contractor furnished controller cabinets and internal equipment (contractor to pick up and install controller cabinet), inspect and approve all traffic signal equipment installed by contractor and terminate, test and activate all field wiring into controller cabinet(s).

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340584	14	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GRS CK: HJP DATE: MAR 2023

PROPOSED FOUNDATION SCHEDULE			
NO	TYPE	OFFSET FROM INDIAN SCHOOL RD MON LINE	OFFSET FROM 51ST AVE MON LINE
P	PSP*	70.6 ft. SOUTH	73.2 ft. WEST
C	CONT	76.6 ft. SOUTH	67.4 ft. WEST
1	P70	58.7 ft. NORTH	69.2 ft. WEST
2	LP	62.1 ft. NORTH	57.7 ft. WEST
3	P70	66.6 ft. NORTH	47.0 ft. EAST
4	BP	57.1 ft. NORTH	60.8 ft. EAST
5	LP	53.0 ft. NORTH	70.7 ft. EAST
6	P70	56.1 ft. SOUTH	62.3 ft. EAST
7	GP	61.5 ft. SOUTH	51.8 ft. EAST
8	BP	70.8 ft. SOUTH	44.7 ft. WEST
9	P70	79.5 ft. SOUTH	57.0 ft. WEST
10	GP	54.9 ft. SOUTH	64.8 ft. WEST

PSP\* - Type "B" Power Service Pedestal Foundation

PROPOSED JUNCTION BOX SCHEDULE			
NO	TYPE	OFFSET FROM INDIAN SCHOOL RD MON LINE	OFFSET FROM 51ST AVE MON LINE
11	#7	56.0 ft. NORTH	58.4 ft. WEST
12	#7	55.2 ft. NORTH	50.9 ft. EAST
13	#7	50.3 ft. SOUTH	66.1 ft. EAST
14	#7	55.9 ft. SOUTH	56.8 ft. WEST

- INSTALL**
- ① thru ⑩ See Foundation Schedule
  - ⑪ thru ⑭ See Junction Box Schedule
  - ① 1" Schedule 40 PVC
  - ② 2" Schedule 40 PVC
  - ③ 2-1/2" Schedule 40 PVC
- REMOVE**
- ① Remove Existing 'A' Pole Foundation, Full Depth, Per COP Traffic Spec 479.2.4 - 7
  - ② Remove Existing Foundation a Minimum of 10" Below Finished Grade Per COP Traffic Spec 479.2.4 - 2
  - ③ Remove Existing Mixed Use Pole (By Others) - 2
  - ⑤ Controller Cabinet and Foundation - 1
  - ⑥ Power Service Pedestal and Foundation - 1

Note:  
See Sheet 5 of 31 for SRP Undercrossing Detail

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW



APPROVED BY:

TRAFFIC SIGNAL ENGINEER:

DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR:

DATE: 7/7/2023

**TRAFFIC SIGNAL PLAN**

CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

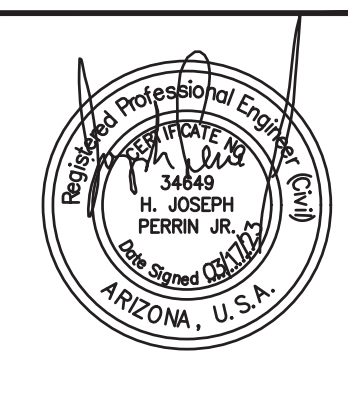
**SIGNAL PLAN**  
51ST AVE & INDIAN SCHOOL RD  
FOUNDATION

PROJECT #: ST89340584	FILE NO: 11176
DR: SMD DES: GRS CK: HJP	SHEET NO: TOTAL SHEETS
DATE: MAR 2023 DATE: MAR 2023 DATE: MAR 2023	NO: 1 4
SCALE: 1" = 20'	QS. #: 1 4



TRAFFIC SIGNAL: 51ST AVE & INDIAN SCHOOL RD PROJECT #: ST89340584 FILE #: 11176

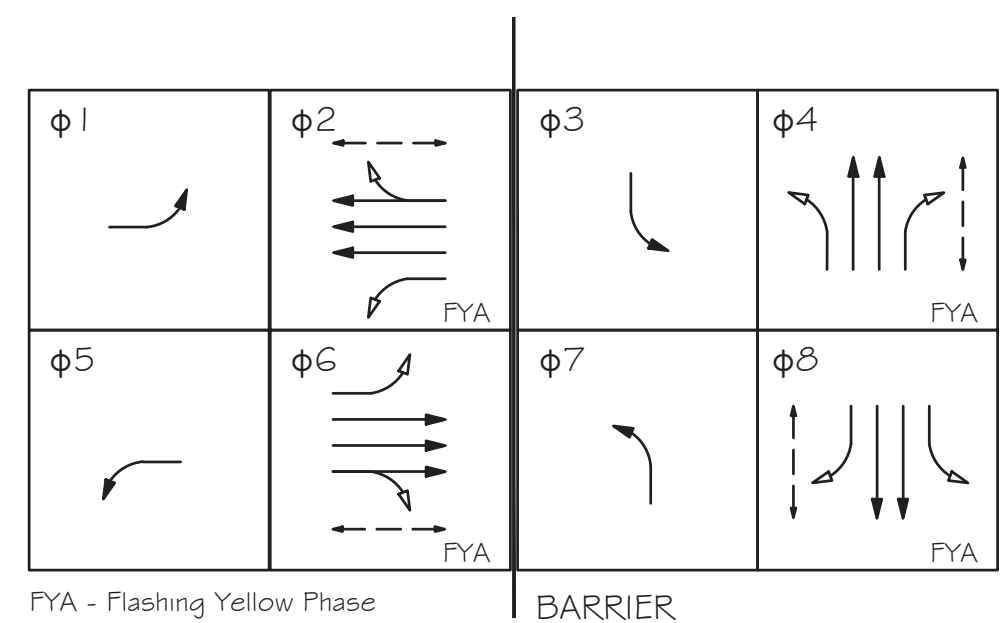




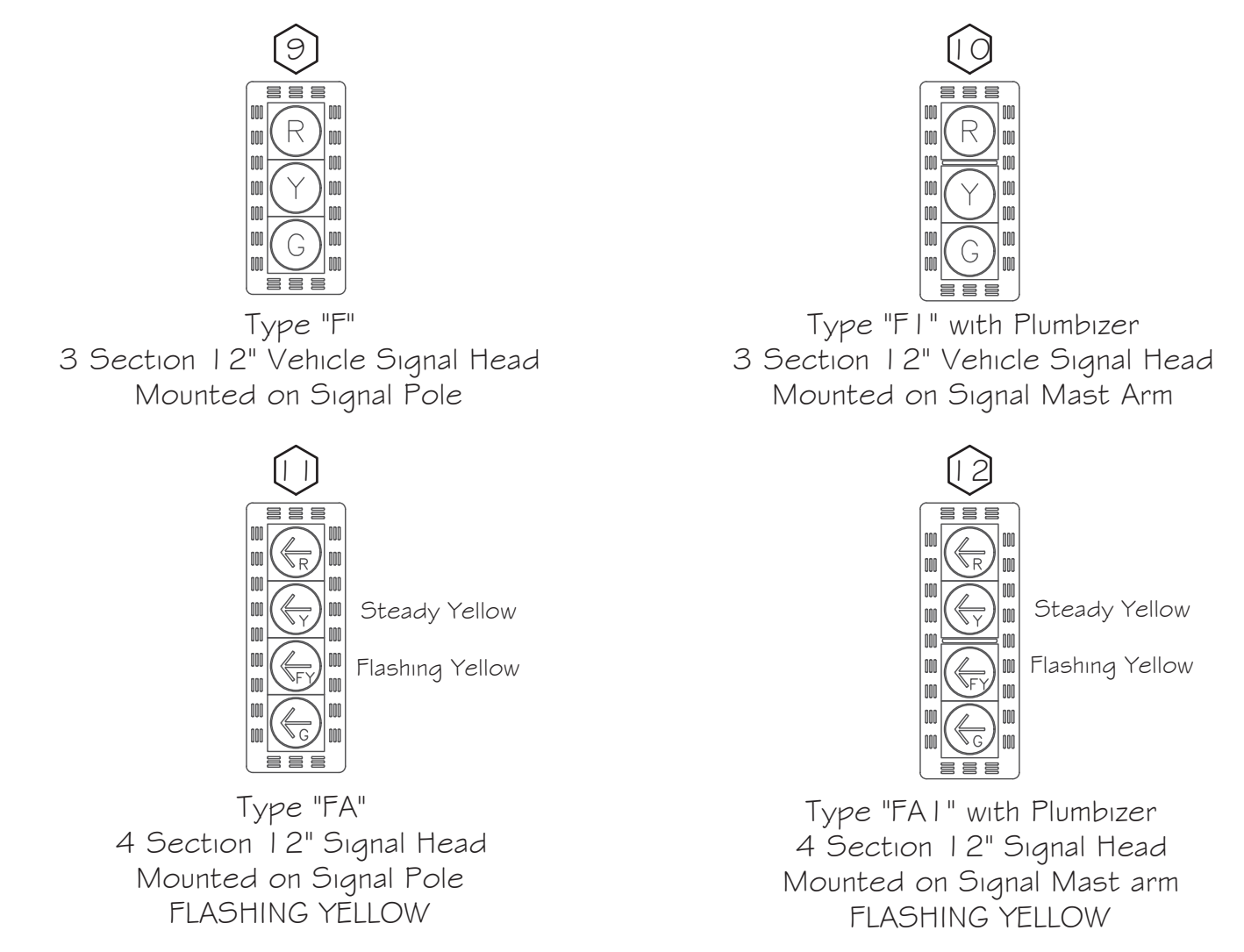
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	15	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

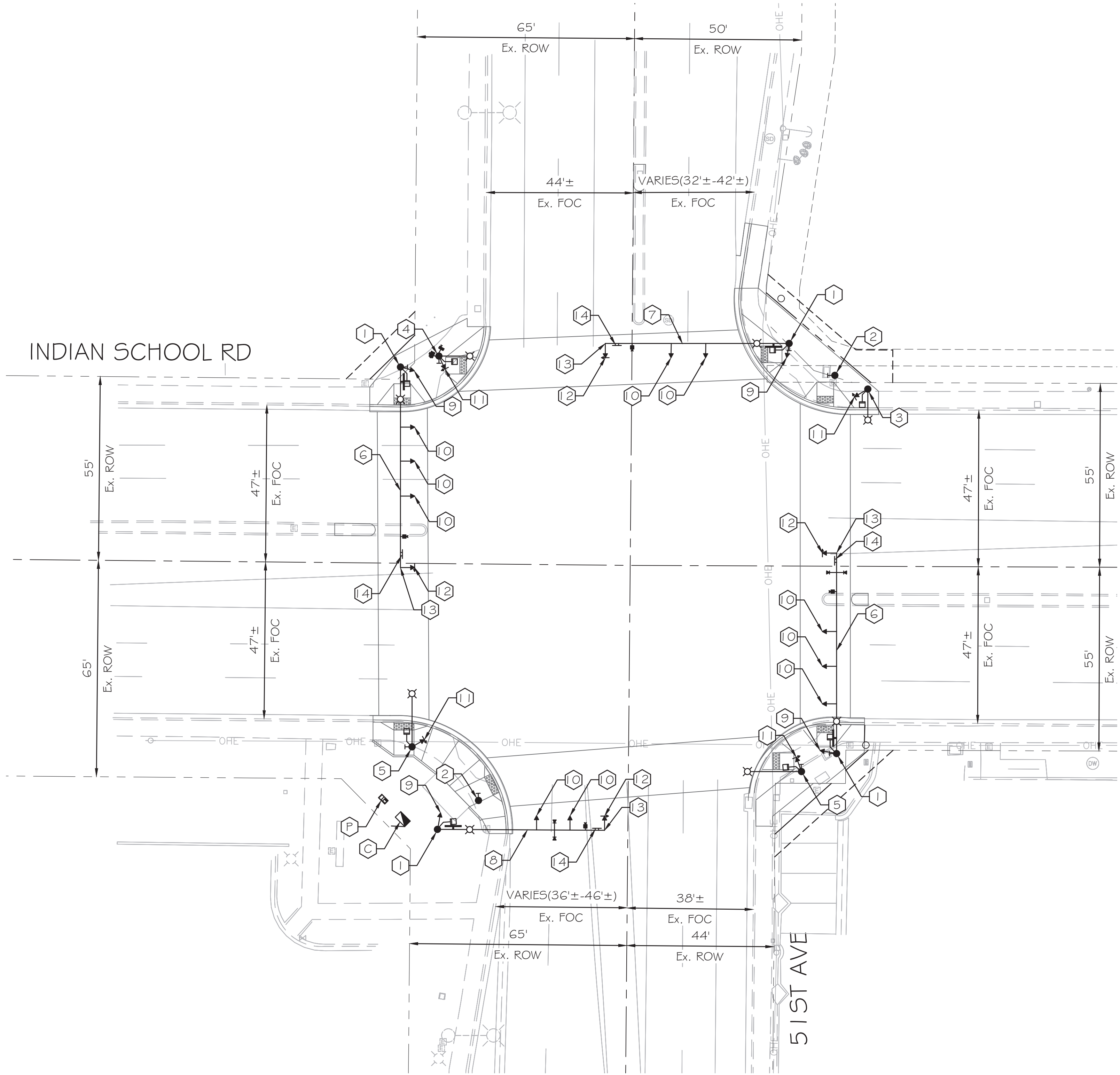
DR: SMD DES: GR5 CK: HJP DATE: MAR 2023



--- Pedestrian Phase   ← Protected Phase   ← Permitted Phase



- INSTALL
- (C) 8 Phase Controller Cabinet - 1 New
  - (P) Power Service Pedestal w/ Battery Backup - 1 New
  - (1) Traffic Signal Pole Type P70 with 5' Riser - 4 New
  - (2) Traffic Signal Pole Type BP - 2 New
  - (3) Traffic Signal Pole Type LP with 5' Riser - 1 New
  - (4) Traffic Signal Pole Type LP with 20' Riser - 1 New
  - (5) Traffic Signal Pole Type GP with Luminaire Arm - 2 New
  - (6) 60' (M55P70+E5) Signal Mast Arm - 2 New
  - (7) 55' (M55P70) Signal Mast Arm - 1 New
  - (8) 50' (M40P70+E10) Signal Mast Arm - 1 New
  - (9) Type F 12" Signal Head Pole Mount - 4 New
  - (10) Type F1 12" Signal Head Mast Arm Mount w/Plumbizer - 10 New
  - (11) Type FA 12" Signal Head Pole Mount - 4 New
  - (12) Type FA1 12" Signal Head Mast Arm Mount w/Plumbizer - 4 New
  - (13) Damper per COP Traffic Signal Standard Detail TS 1-5 - 4 New
  - (X) LED - 8 New
  - (I) LED Illuminated Street Sign - 2 New (30'X96"), 2 New (20'X96")
  - (M) Mast Arm Mount Sign - 4 New
  - (H) Pedestrian Head - 8 New
  - (A) APS Push Buttons - 8 New
  - (R) Wireless Radio - 1 Existing on SW Pole (Reuse on NW Pole)
  - (C) PTZ CCTV Camera - 1 New (NW Pole)
  - (V) Vehicle Detection - 4 New
  - (D) 2-Way EVP Device - 2 New



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]* DATE: 6/16/2023

STREET TRANSPORTATION SERVICES DEPUTY DIRECTOR: *[Signature]* DATE: 7/7/2023

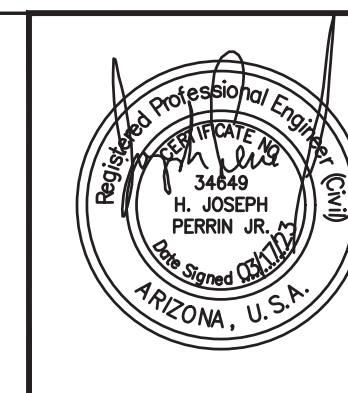
PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW.

TRAFFIC SIGNAL PLAN  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

SIGNAL PLAN  
51ST AVE & INDIAN SCHOOL RD  
EQUIPMENT

PROJECT #: ST89340584	FILE NO: 11176
DR: SMD DES: GR5 CK: HJP	SHEET NO: 2
DATE: MAR 2023 DATE: MAR 2023 DATE: MAR 2023	TOTAL SHEETS: 4
SCALE: 1" = 20'	Q5. #:

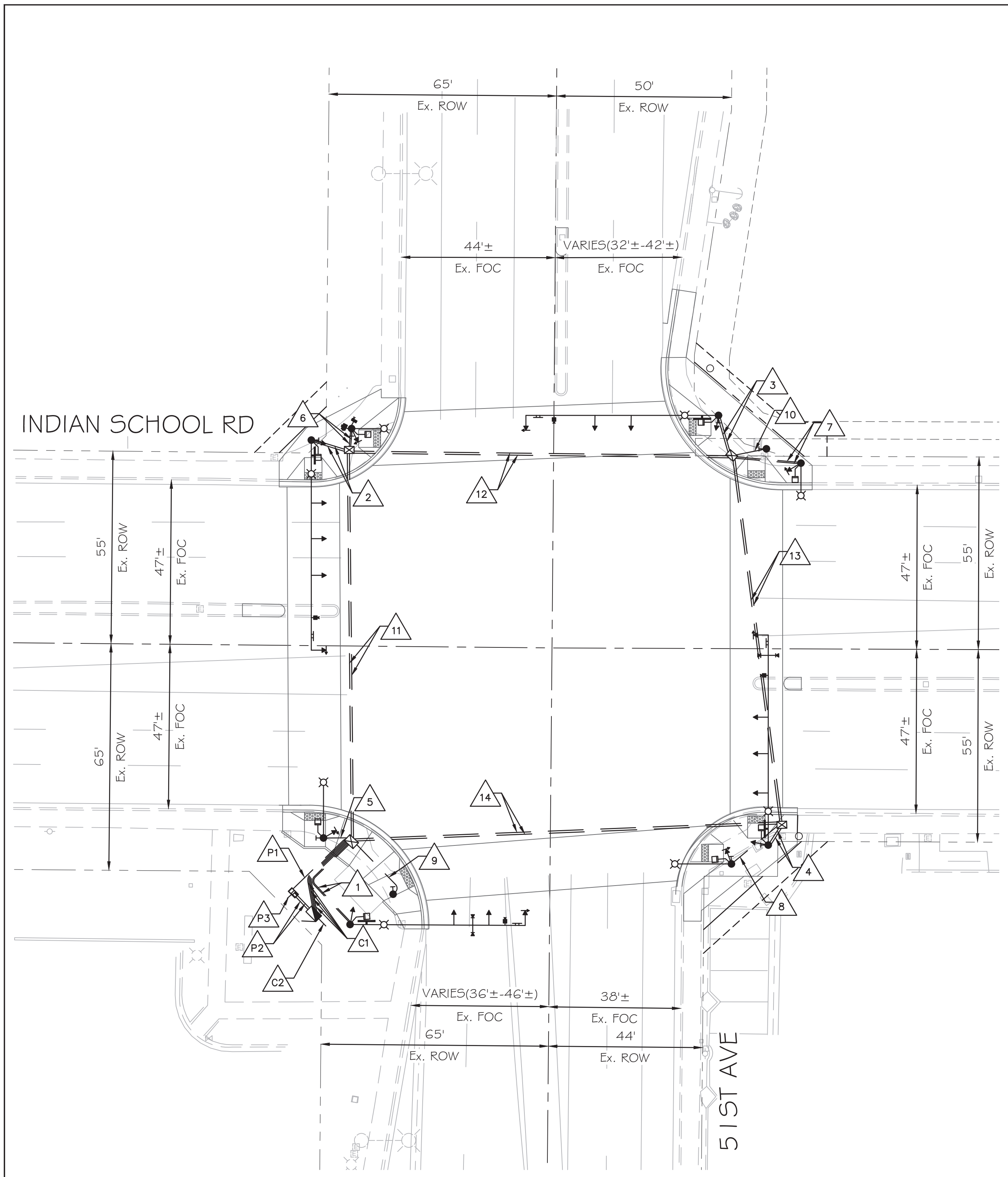




F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	16	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GR5 CK: HJP DATE: MAR 2023



**C1** Controller to SWC #7 Junction Box

CONDUIT 1	CONDUIT 2	CONDUIT 3	CONDUIT 4
#10 Bare Copper #10 AWG White 3C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (4) CCTV Cable (1) CAT 5e Cable (1) EVP Detection Cable (2) EVP Confirmation Cable (2)	#10 Bare Copper #10 AWG Black #10 AWG White #10 AWG Green	Detectible Mule Tape

**C2** Controller to Stub Out

CONDUIT 1
Detectible Mule Tape

**P1** Power Service Pedestal to SWC #7 Junction Box

CONDUIT 1
#10 Bare Copper 3C IMSA Cable (Luminaire) 3C IMSA Cable (Sign) 3C IMSA Cable (Radio) 5C IMSA Cable

**P2** Power Service Pedestal to Controller

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG Black #10 AWG White #10 AWG Green	#10 Bare Copper CAT 5e Cable (1)

**P3** Power Service Pedestal to Stub Out

CONDUIT 1
Detectible Mule Tape

**1** SWC #7 Junction Box to P70 Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1) EVP Detection Cable (1) EVP Confirmation Cable (1)

**2** NWC Junction Box to P70 Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1)

**3** NEC Junction Box to P70 Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1)

**4** SEC Junction Box to P70 Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1) EVP Detection Cable (1) EVP Confirmation Cable (1)

**5** SWC #7 Junction Box to GP Pole

CONDUIT 1
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)

**6** NWC Junction Box to LP Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 3C IMSA Cable (Radio)	CCTV Cable (1) CAT 5e Cable (1)

**7** NEC Junction Box to LP Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)	Detectible Mule Tape

**8** SEC Junction Box to GP Pole

CONDUIT 1
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)

**9** SWC #7 Junction Box to BP Pole

CONDUIT 1
#10 Bare Copper #10 AWG White

**10** NEC Junction Box to BP Pole

CONDUIT 1
#10 Bare Copper #10 AWG White

**11** SWC #7 Junction Box to NWC Junction Box

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 3C IMSA Cable (Radio) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (2) CCTV Cable (1) CAT 5e Cable (1)

**12** NWC Junction Box to NEC Junction Box

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (1)

**13** NEC Junction Box to SEC Junction Box

CONDUIT 1	CONDUIT 2
42C IMSA Cable	Detectible Mule Tape

**14** SEC Junction Box to SWC #7 Junction Box

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (1) EVP Detection Cable (1) EVP Confirmation Cable (1)



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*

DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

DATE: 7/7/2023

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW.

**TRAFFIC SIGNAL PLAN**

**CITY OF PHOENIX, ARIZONA**

**STREET TRANSPORTATION DEPARTMENT**

**SIGNAL PLAN**

**51ST AVE & INDIAN SCHOOL RD**

**WIRING**

PROJECT #: ST89340584 FILE NO: 11176

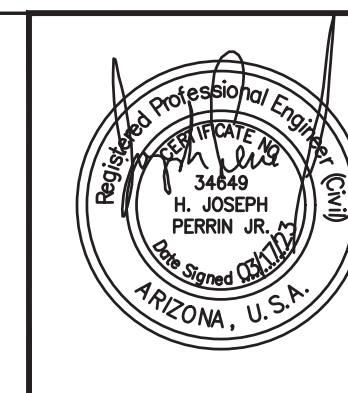
DR: SMD DES: GR5 CK: HJP SHEET NO: TOTAL SHEETS

DATE: MAR 2023 DATE: MAR 2023 DATE: MAR 2023 NO: 3 4

SCALE: 1" = 20' Q5. #:

PROJECT #: ST89340584 FILE #: 11176



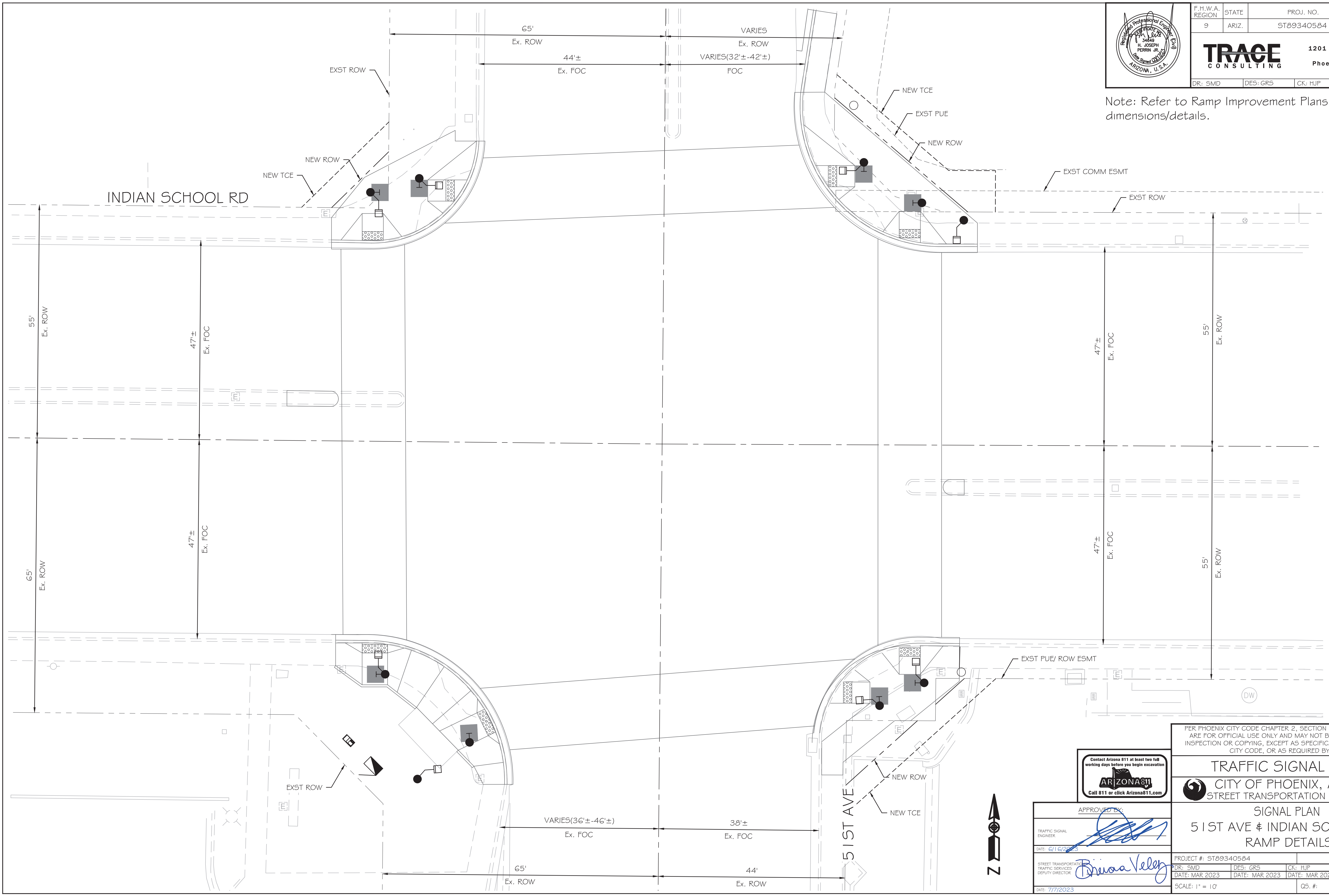


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	17	31

**TRACE CONSULTING**  
1201 E. Jefferson St.  
Suite 3  
Phoenix, AZ 85034

DR: SMD    DES: GRS    CK: HJP    DATE: MAR 2023

Note: Refer to Ramp Improvement Plans for corner dimensions/details.



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*  
DATE: 6/16/2023

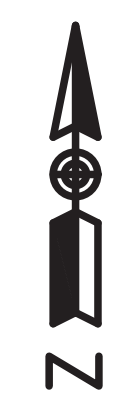
STREET TRANSPORTATION SERVICES DEPUTY DIRECTOR: *[Signature]*  
DATE: 7/7/2023

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**TRAFFIC SIGNAL PLAN**  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

**SIGNAL PLAN**  
51ST AVE # INDIAN SCHOOL RD  
RAMP DETAILS

PROJECT #: ST89340584	FILE NO: 11176
DR: SMD    DES: GRS    CK: HJP	SHEET NO: 17
DATE: MAR 2023    DATE: MAR 2023    DATE: MAR 2023	TOTAL SHEETS: 31
SCALE: 1" = 10'	Q.S. #: 4



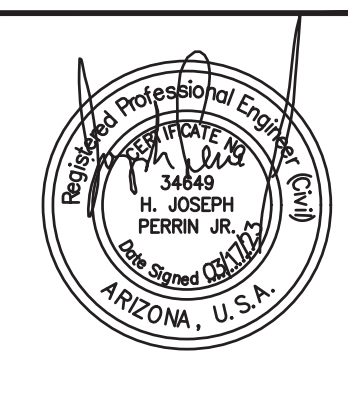
TRAFFIC SIGNAL:

51ST AVE # INDIAN SCHOOL RD

PROJECT #: ST89340584

FILE #: 11176





F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	18	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GRS CK: HJP DATE: MAR 2023

PROPOSED FOUNDATION SCHEDULE

NO	TYPE	OFFSET FROM INDIAN SCHOOL RD MON LINE	OFFSET FROM 67TH AVE MON LINE
P	PSP*	51.2 ft. SOUTH	93.8 ft. EAST
C	CONT	50.5 ft. SOUTH	85.3 ft. EAST
1	P45	49.6 ft. NORTH	54.7 ft. WEST
2	LP	66.3 ft. NORTH	44.3 ft. WEST
3	P70	66.8 ft. NORTH	44.6 ft. EAST
4	LP	53.8 ft. NORTH	54.7 ft. EAST
5	P70	55.6 ft. SOUTH	64.2 ft. EAST
6	LP	74.7 ft. SOUTH	52.8 ft. EAST
7	P45	66.8 ft. SOUTH	40.9 ft. WEST
8	GP	46.6 ft. SOUTH	56.7 ft. WEST

PSP\* - Type "B" Power Service Pedestal Foundation

PROPOSED JUNCTION BOX SCHEDULE

NO	TYPE	OFFSET FROM INDIAN SCHOOL RD MON LINE	OFFSET FROM 67TH AVE MON LINE
9	#7	70.4 ft. NORTH	36.4 ft. WEST
10	#7	63.7 ft. NORTH	48.9 ft. EAST
11	#7	51.5 ft. SOUTH	72.2 ft. EAST
12	#7	60.5 ft. SOUTH	39.7 ft. WEST

INSTALL

- ① thru ⑧ See Foundation Schedule
- ⑨ thru ⑫ See Junction Box Schedule

- ① 1" Schedule 40 PVC
- ② 2" Schedule 40 PVC
- ③ 2-1/2" Schedule 40 PVC

REMOVE

- ① Remove Existing 'A' Pole Foundation, Full Depth, Per COP Traffic Spec 479.2.4 - 4
- ② Remove Existing Foundation a Minimum of 10' Below Finished Grade Per COP Traffic Spec 479.2.4 - 2
- ③ Remove Existing Mixed Use Pole (By Others) - 1
- ④ Remove Existing 30"± Foundation, Full Depth, Per COP Traffic Spec 479.2.4 - 1
- ⑤ Controller Cabinet and Foundation - 1

Note: See Sheet 5 of 31 for SRP Undercrossing Detail

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT

SIGNAL PLAN 67TH AVE & INDIAN SCHOOL RD FOUNDATION

APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*

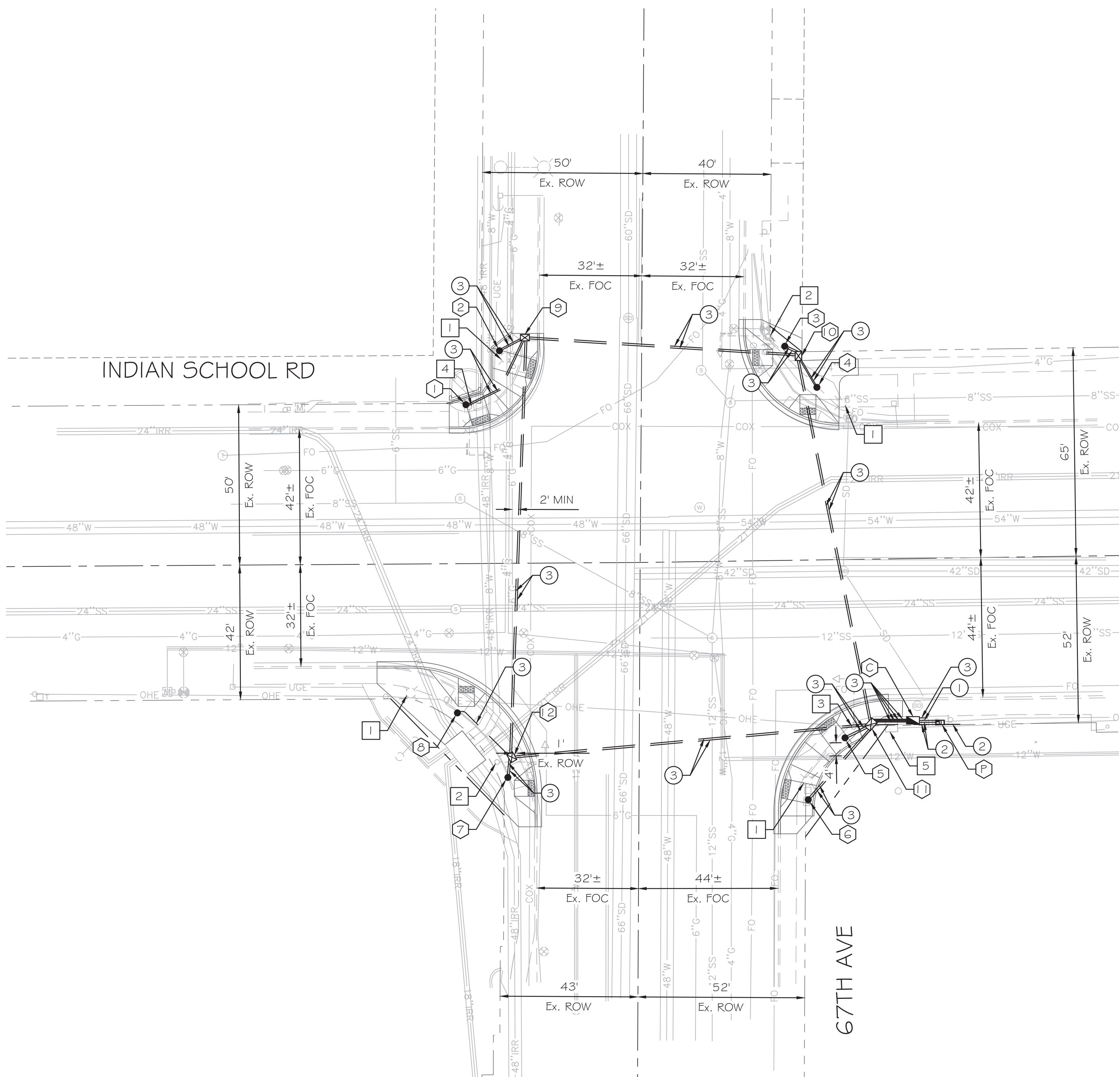
DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

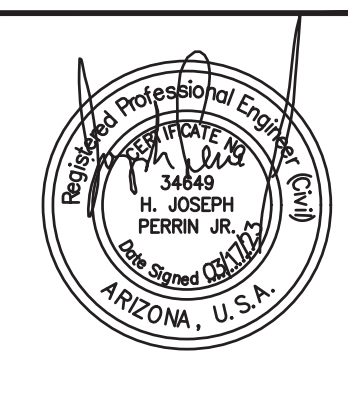
DATE: 7/7/2023

PROJECT #: ST89340584	FILE NO: 11177
DR: SMD DES: GRS CK: HJP	SHEET NO: 18
DATE: MAR 2023	TOTAL SHEETS: 31
SCALE: 1" = 20'	Q5: #:

1. GENERAL NOTES:
- The contractor shall notify the City of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to ordering any traffic signal equipment. The contractor shall verify they have the current approved plan set prior to starting and ordering of any equipment.
  - The contractor shall layout all ADA ramps, junction boxes and foundation locations for approval by a traffic signal representative. Contractor must have a current visible Bluestake showing all utilities. All ADA ramps shall be laid out in white marking paint to determine best traffic signal pole locations.
  - Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not been begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director of Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.
  - All traffic signal equipment and materials shall follow the current City of Phoenix Traffic Signal Standard Details and Specifications ([www.phoenix.gov/streets/reference-material](http://www.phoenix.gov/streets/reference-material)). The contractor shall have a copy of these standards along with a complete set of approved plans on site at all times during signal and lighting systems construction. The contractor shall have a competent supervisor capable of reading and understanding plans and specifications and thoroughly experienced in the construction of traffic signals. The contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. It will be the responsibility of the contractor to supply verification of certification. If a jobsite is inspected and a certified Electrician is not on site, a stop work order will be issued.
  - The contractor is responsible for the construction of the project; its planning, safety, quality and completion. The City of Phoenix inspection team would make the determination if the work performed meets the criteria and if not, may request that the work be redone at the contractor's expense.
  - Foundation elevations must be within 1/4" of finished sidewalk grade.
  - A minimum of a four (4) foot clear path is required around all traffic signal poles. A four by four (4x4) flat landing centered on the pedestrian push button must be maintained as provided on the Traffic Signal Standard Details (see note 1.4).
  - Contractor shall verify location and orientation of all pole and mast arm mounted equipment on all new traffic signal poles and mast arms with the Traffic Signal shop's representative prior to drilling any holes in the poles or mast arms. Failure to get approval may result in replacement of the pole at the contractor's expense.
2. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS
- The contractor shall supply all materials and perform all work except as indicated in note 3.
3. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS
- Traffic Signal representative shall approve marked layout of ADA ramps, junction boxes and foundation locations prior to excavation, prep contractor furnished controller cabinets and internal equipment (contractor to pick up and install controller cabinet), inspect and approve all traffic signal equipment installed by contractor and terminate, test and activate all field wiring into controller cabinet(s).



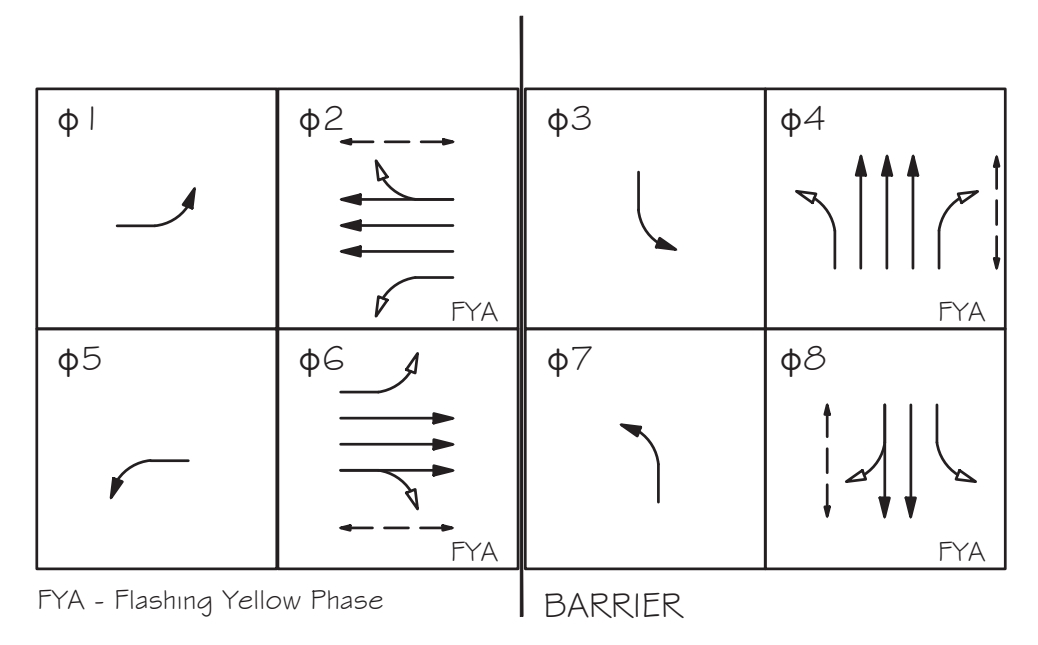




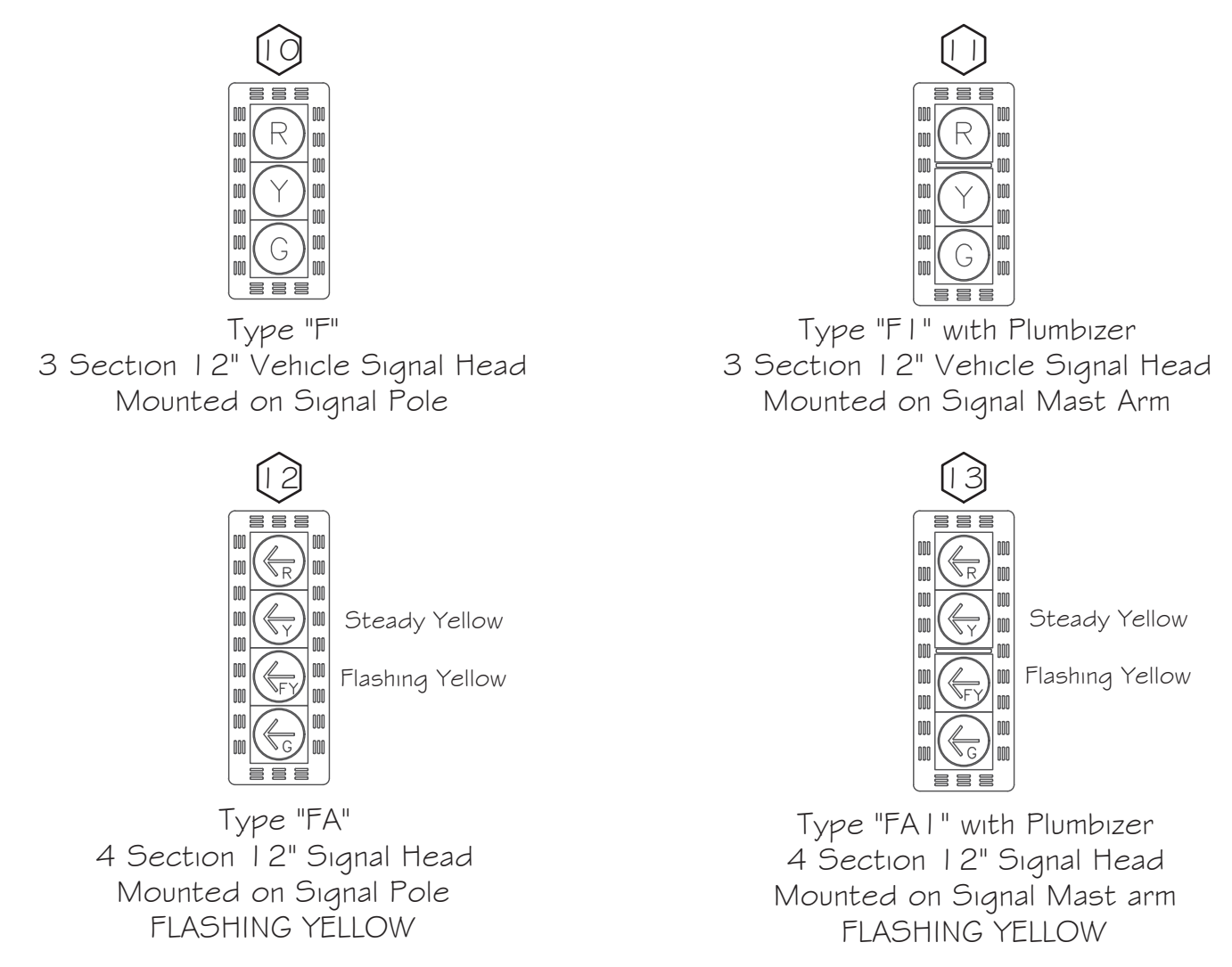
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	19	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

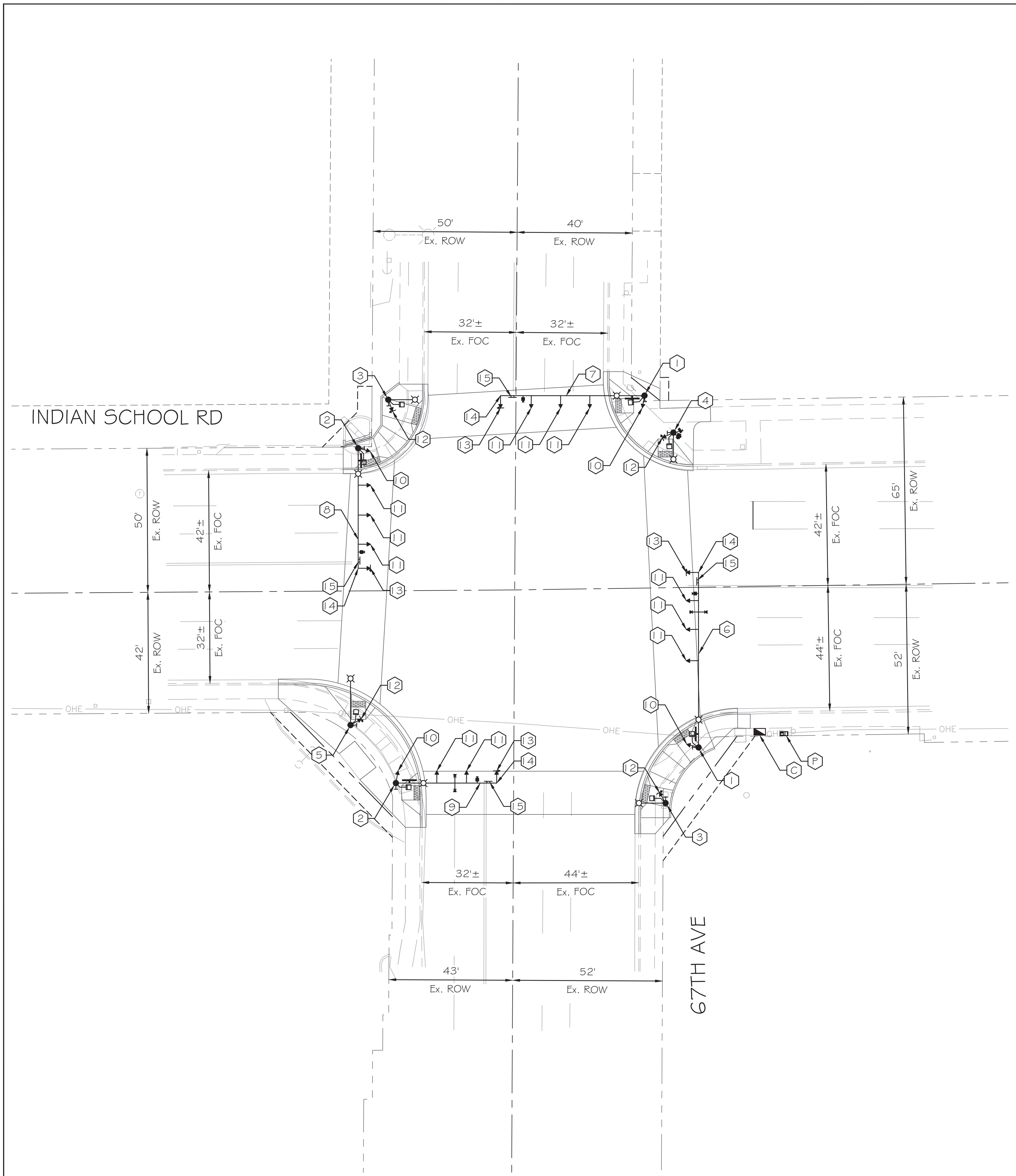
DR: SMD DES: GR5 CK: HJP DATE: MAR 2023



--- Pedestrian Phase   ← Protected Phase   ← Permitted Phase



- INSTALL
- (C) 8 Phase Controller Cabinet - 1 New
  - (P) Power Service Pedestal w/ Battery Backup - 1 New
  - (1) Traffic Signal Pole Type P70 with 5' Riser - 2 New
  - (2) Traffic Signal Pole Type P45 with 5' Riser - 2 New
  - (3) Traffic Signal Pole Type LP with 5' Riser - 2 New
  - (4) Traffic Signal Pole Type LP with 20' Riser - 1 New
  - (5) Traffic Signal Pole Type GP with Luminaire Arm - 1 New
  - (6) 60' (M55P70+E5) Signal Mast Arm - 1 New
  - (7) 50' (M40P70+E10) Signal Mast Arm - 1 New
  - (8) 45' (M40P70+E5) Signal Mast Arm - 1 New
  - (9) 35' (M30P45+E5) Signal Mast Arm - 1 New
  - (10) Type F 12" Signal Head Pole Mount - 4 New
  - (11) Type F1 12" Signal Head Mast Arm Mount w/Plumbizer - 11 New
  - (12) Type FA 12" Signal Head Pole Mount - 4 New
  - (13) Type FA1 12" Signal Head Mast Arm Mount w/Plumbizer - 4 New
  - (14) Damper per COP Traffic Signal Standard Detail TS 1-5 - 4 New
  - (X) LED - 8 New
  - (I) LED Illuminated Street Sign - 2 New (30'x96'), 2 New (20'x96')
  - (M) Mast Arm Mount Sign - 4 New
  - (H) Pedestrian Head - 8 New
  - (A) APS Push Buttons - 8 New
  - (R) Wireless Radio - 1 Existing on NE pole (Reuse on new NE Pole)
  - (C) PTZ CCTV Camera - 1 New (NE Pole)
  - (V) Vehicle Detection - 4 New
  - (D) 2-Way EVP Device - 2 New



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*  
DATE: 6/16/2023

STREET TRANSPORTATION SERVICES DEPARTMENT DEPUTY DIRECTOR: *[Signature]*  
DATE: 7/7/2023

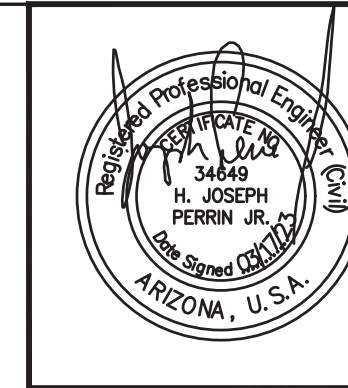
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TRAFFIC SIGNAL PLAN  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

SIGNAL PLAN  
67TH AVE & INDIAN SCHOOL RD  
EQUIPMENT

PROJECT #: ST89340584	FILE NO: 11177
DR: SMD DES: GR5 CK: HJP	SHEET NO: 2
DATE: MAR 2023 DATE: MAR 2023 DATE: MAR 2023	TOTAL SHEETS: 4
SCALE: 1" = 20'	QS. #:





F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	20	31

**TRACE CONSULTING**  
1201 E. Jefferson St.  
Suite 3  
Phoenix, AZ 85034

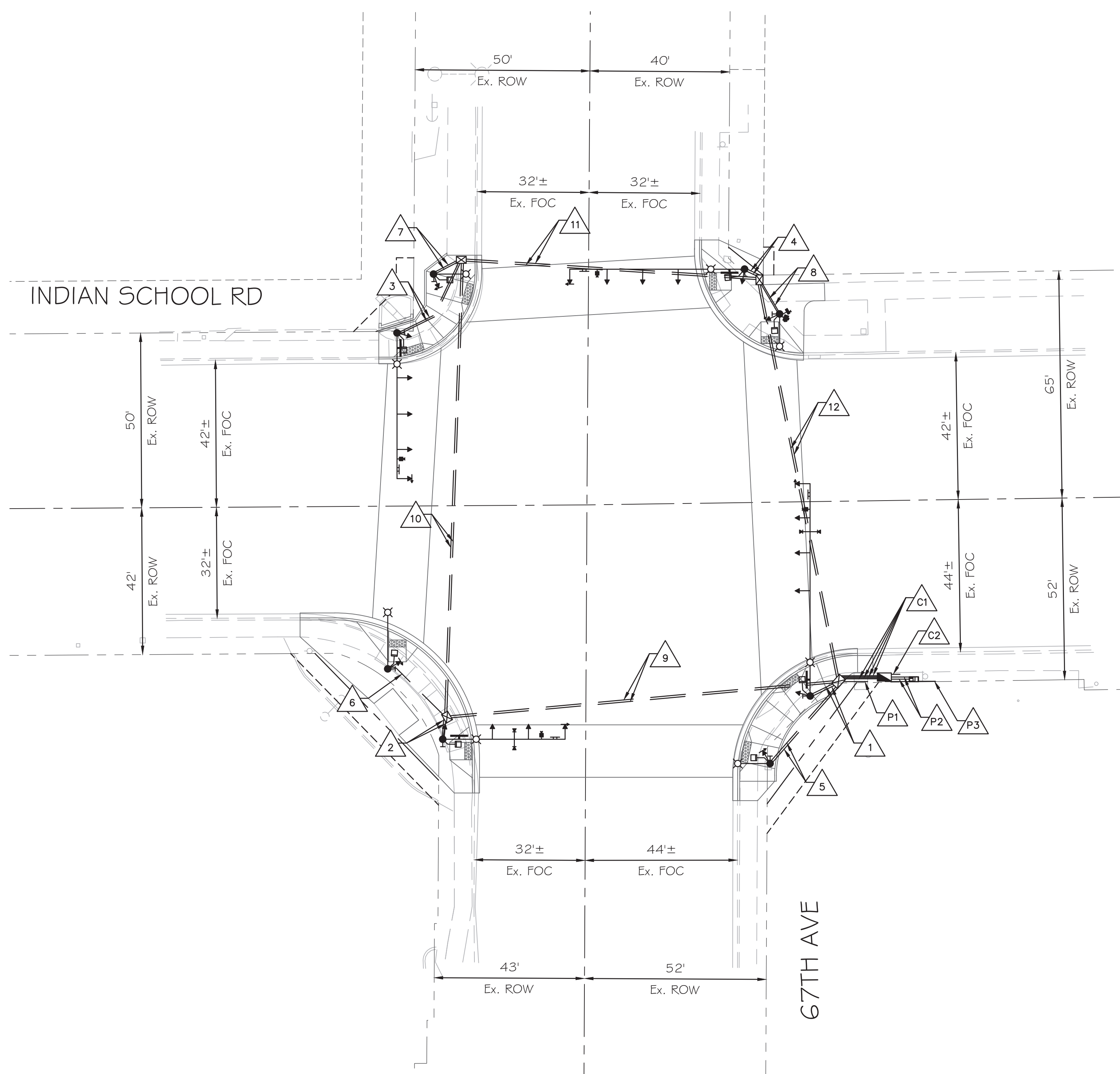
DR: SMD    DES: GR5    CK: HJP    DATE: MAR 2023

TRAFFIC SIGNAL:

67TH AVE & INDIAN SCHOOL RD

PROJECT #: ST89340584

FILE #: 11177



**C1 Controller to #7 Junction Box**

CONDUIT 1	CONDUIT 2	CONDUIT 3	CONDUIT 4
#10 Bare Copper #10 AWG White 3C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (4) CCTV Cable (1) CAT 5e Cable (1) EVP Detection Cable (2) EVP Confirmation Cable (2)	#10 Bare Copper #10 AWG Black #10 AWG White #10 AWG Green	Detectible Mule Tape

**C2 Controller to Stub Out**

CONDUIT 1
Detectible Mule Tape

**P1 Power Service Pedestal to SEC #7 Junction Box**

CONDUIT 1
#10 Bare Copper 3C IMSA Cable (Luminaire) 3C IMSA Cable (Sign) 3C IMSA Cable (Radio) 5C IMSA Cable

**P2 Power Service Pedestal to Controller**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG Black #10 AWG White #10 AWG Green	#10 Bare Copper CAT 5e Cable (1)

**P3 Power Service Pedestal to Stub Out**

CONDUIT 1
Detectible Mule Tape

**1 SEC #7 Junction Box to P70 Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1) EVP Detection Cable (1) EVP Confirmation Cable (1)

**2 SWC Junction Box to P45 Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1) EVP Detection Cable (1) EVP Confirmation Cable (1)

**3 NWC Junction Box to P45 Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1)

**4 NEC Junction Box to P70 Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1)

**5 SEC #7 Junction Box to LP Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)	Detectible Mule Tape

**6 SWC Junction Box to GP Pole**

CONDUIT 1
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)

**7 NWC Junction Box to LP Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)	Detectible Mule Tape

**8 NEC Junction Box to LP Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 3C IMSA Cable (Radio)	CCTV Cable (1) CAT 5e Cable (1)

**9 SEC #7 Junction Box to SWC Junction Box**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (2) EVP Detection Cable (1) EVP Confirmation Cable (1)

**10 SWC Junction Box to NWC Junction Box**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (1)

**11 NWC Junction Box to NEC Junction Box**

CONDUIT 1	CONDUIT 2
42C IMSA Cable	Detectible Mule Tape

**12 NEC Junction Box to SEC #7 Junction Box**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 3C IMSA Cable (Radio) 42C IMSA Cable	#10 Bare Copper Video Detection (1) CCTV Cable (1) CAT 5e Cable (1)



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*

DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

DATE: 7/7/2023

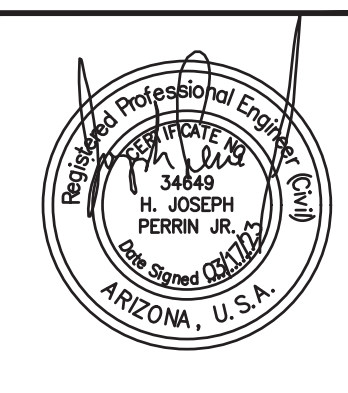
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**TRAFFIC SIGNAL PLAN**  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

**SIGNAL PLAN**  
67TH AVE & INDIAN SCHOOL RD  
WIRING

PROJECT #: ST89340584	FILE NO: 11177
DR: SMD    DES: GR5    CK: HJP	SHEET NO: 20
DATE: MAR 2023    DATE: MAR 2023	TOTAL SHEETS: 31
SCALE: 1" = 20'	Q5. #: 3



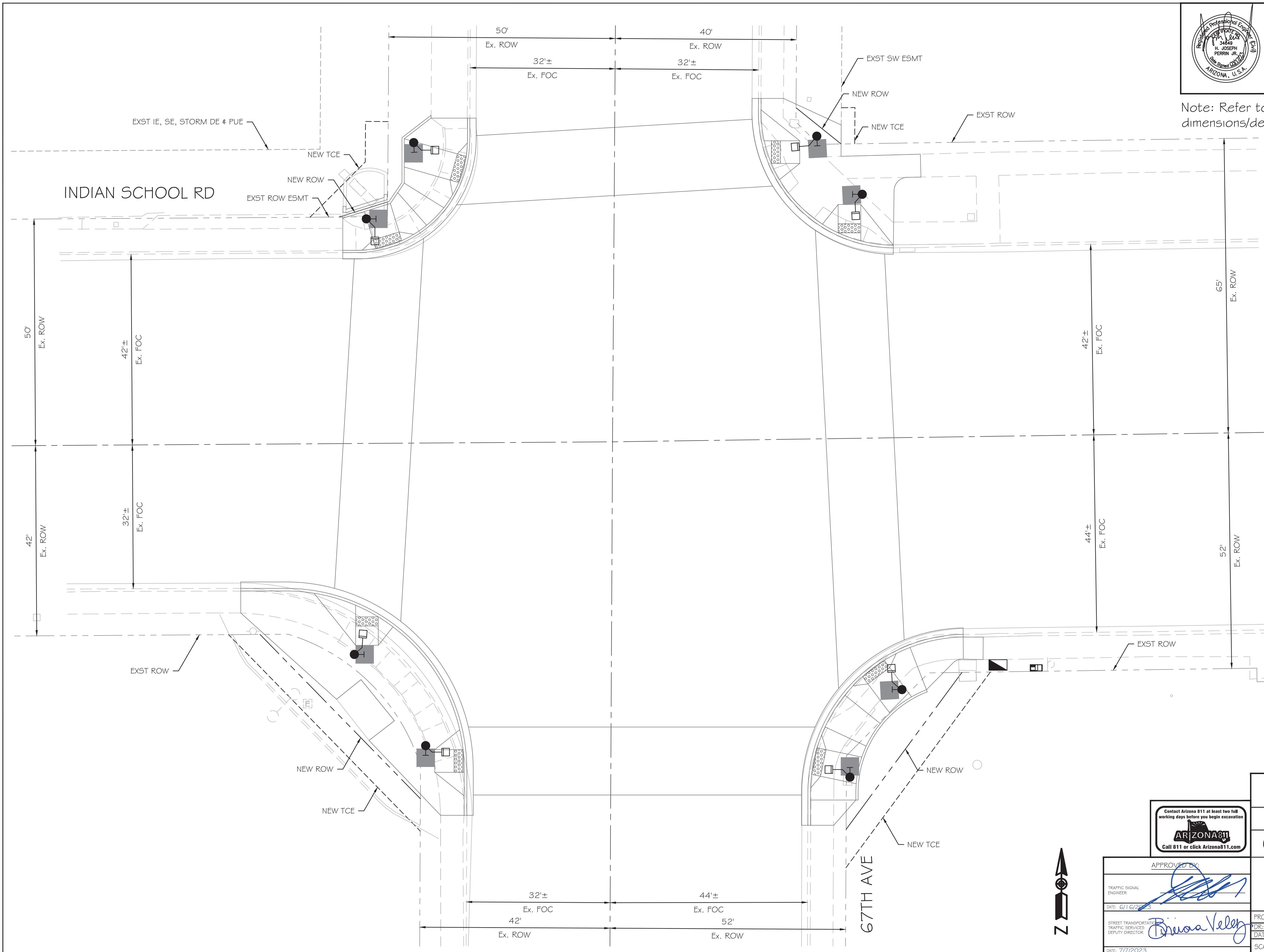


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	21	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GRS CK: HJP DATE: MAR 2023

Note: Refer to Ramp Improvement Plans for corner dimensions/details.



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*

DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

DATE: 7/7/2023

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**TRAFFIC SIGNAL PLAN**

**CITY OF PHOENIX, ARIZONA**

STREET TRANSPORTATION DEPARTMENT

**SIGNAL PLAN**

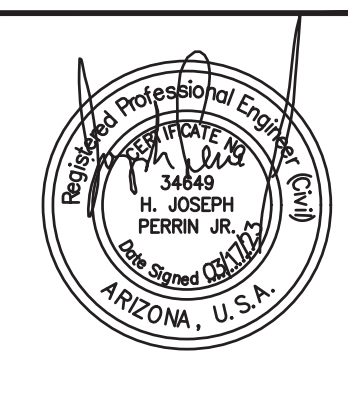
**67TH AVE & INDIAN SCHOOL RD**

**RAMP DETAILS**

PROJECT #:	ST89340584	FILE NO:	11177
DR:	SMD	DES:	GRS
DATE:	MAR 2023	CK:	HJP
DATE:	MAR 2023	DATE:	MAR 2023
SCALE:	1" = 10'	SHEET NO:	4
		TOTAL SHEETS:	4







F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	22	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GRS CK: HJP DATE: MAR 2023

PROPOSED FOUNDATION SCHEDULE

NO	TYPE	OFFSET FROM THOMAS RD MON LINE	OFFSET FROM 71ST AVE MON LINE
P	PSP*	83.2 ft. NORTH	30.6 ft. WEST
C	CONT	59.4 ft. NORTH	43.8 ft. WEST
1	P70	55.5 ft. NORTH	52.5 ft. WEST
2	AP	70.6 ft. NORTH	28.2 ft. WEST
3	P45	72.0 ft. NORTH	31.2 ft. EAST
4	GP	57.6 ft. NORTH	46.7 ft. EAST
5	P70	54.3 ft. SOUTH	44.7 ft. EAST
6	AP	71.7 ft. SOUTH	28.1 ft. EAST
7	P45	69.2 ft. SOUTH	32.9 ft. WEST
8	LP	55.1 ft. SOUTH	49.0 ft. WEST

PSP\* - Type "B" Power Service Pedestal Foundation

PROPOSED JUNCTION BOX SCHEDULE

NO	TYPE	OFFSET FROM THOMAS RD MON LINE	OFFSET FROM 71ST AVE MON LINE
9	#7	51.8 ft. NORTH	37.7 ft. WEST
10	#7	57.0 ft. NORTH	34.5 ft. EAST
11	#7	56.8 ft. SOUTH	32.5 ft. EAST
12	#7	60.9 ft. SOUTH	38.5 ft. WEST

INSTALL

- ① thru ⑧ See Foundation Schedule
- ⑨ thru ⑫ See Junction Box Schedule

- ① 1" Schedule 40 PVC
- ② 2" Schedule 40 PVC
- ③ 2-1/2" Schedule 40 PVC

REMOVE

- ① Remove Existing 'A' Pole Foundation, Full Depth, Per COP Traffic Spec 479.2.4 - 4
- ② Remove Existing Foundation a Minimum of 10' Below Finished Grade Per COP Traffic Spec 479.2.4 - 3
- ③ Remove Existing Mixed Use Pole (By Others) - 1
- ⑤ Controller Cabinet and Foundation - 1

Note: See Sheet 5 of 31 for SRP Undercrossing Detail

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT

SIGNAL PLAN

71ST AVE & THOMAS RD FOUNDATION

APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*

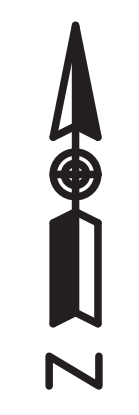
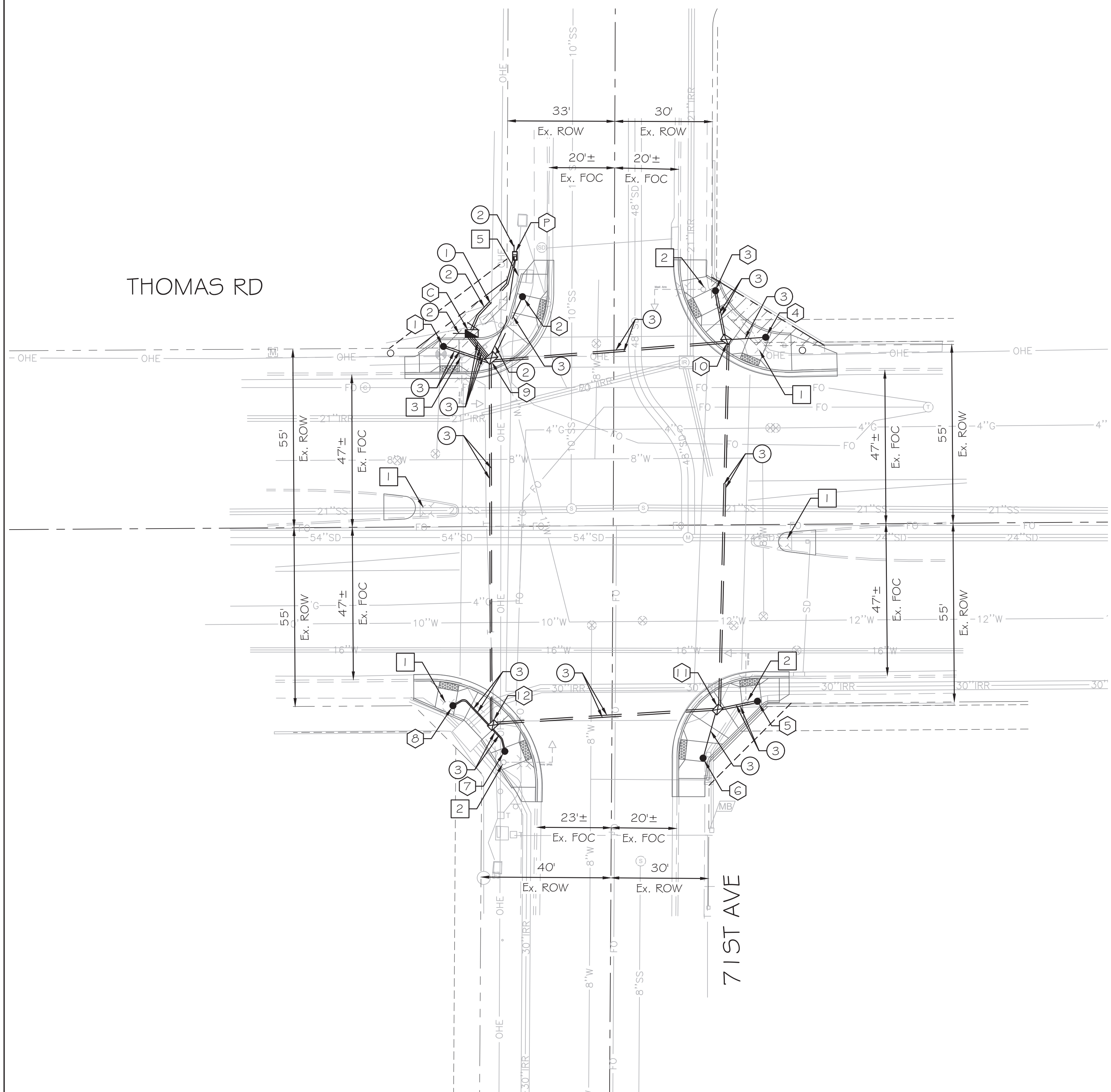
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STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

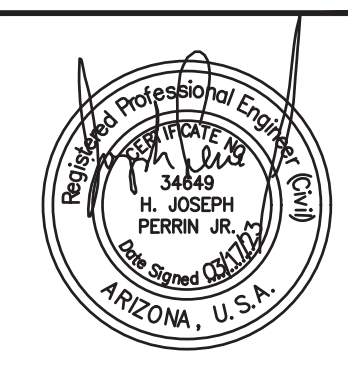
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PROJECT #: ST89340584	FILE NO: 11178
DR: SMD DES: GRS CK: HJP	SHEET NO: 22
DATE: MAR 2023	DATE: MAR 2023
SCALE: 1" = 20'	TOTAL SHEETS: 31

1. GENERAL NOTES:
- The contractor shall notify the City of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to ordering any traffic signal equipment. The contractor shall verify they have the current approved plan set prior to starting and ordering of any equipment.
  - The contractor shall layout all ADA ramps, junction boxes and foundation locations for approval by a traffic signal representative. Contractor must have a current visible Bluestake showing all utilities. All ADA ramps shall be laid out in white marking paint to determine best traffic signal pole locations.
  - Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not been begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director of Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.
  - All traffic signal equipment and materials shall follow the current City of Phoenix Traffic Signal Standard Details and Specifications ([www.phoenix.gov/streets/reference-material](http://www.phoenix.gov/streets/reference-material)). The contractor shall have a copy of these standards along with a complete set of approved plans on site at all times during signal and lighting systems construction. The contractor shall have a competent supervisor capable of reading and understanding plans and specifications and thoroughly experienced in the construction of traffic signals. The contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. It will be the responsibility of the contractor to supply verification of certification. If a jobsite is inspected and a certified Electrician is not on site, a stop work order will be issued.
  - The contractor is responsible for the construction of the project; its planning, safety, quality and completion. The City of Phoenix inspection team would make the determination if the work performed meets the criteria and if not, may request that the work be redone at the contractor's expense.
  - Foundation elevations must be within 1/4" of finished sidewalk grade.
  - A minimum of a four (4) foot clear path is required around all traffic signal poles. A four by four (4x4) flat landing centered on the pedestrian push button must be maintained as provided on the Traffic Signal Standard Details (see note 1.4).
  - Contractor shall verify location and orientation of all pole and mast arm mounted equipment on all new traffic signal poles and mast arms with the Traffic Signal shop's representative prior to drilling any holes in the poles or mast arms. Failure to get approval may result in replacement of the pole at the contractor's expense.
2. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS
- The contractor shall supply all materials and perform all work except as indicated in note 3.
3. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS
- Traffic Signal representative shall approve marked layout of ADA ramps, junction boxes and foundation locations prior to excavation, prep contractor furnished controller cabinets and internal equipment (contractor to pick up and install controller cabinet), inspect and approve all traffic signal equipment installed by contractor and terminate, test and activate all field wiring into controller cabinet(s).



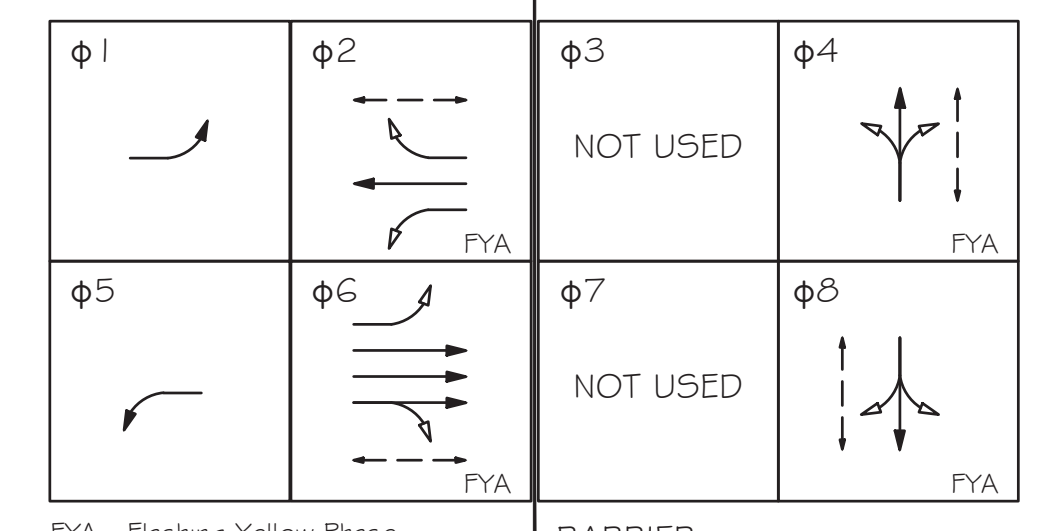




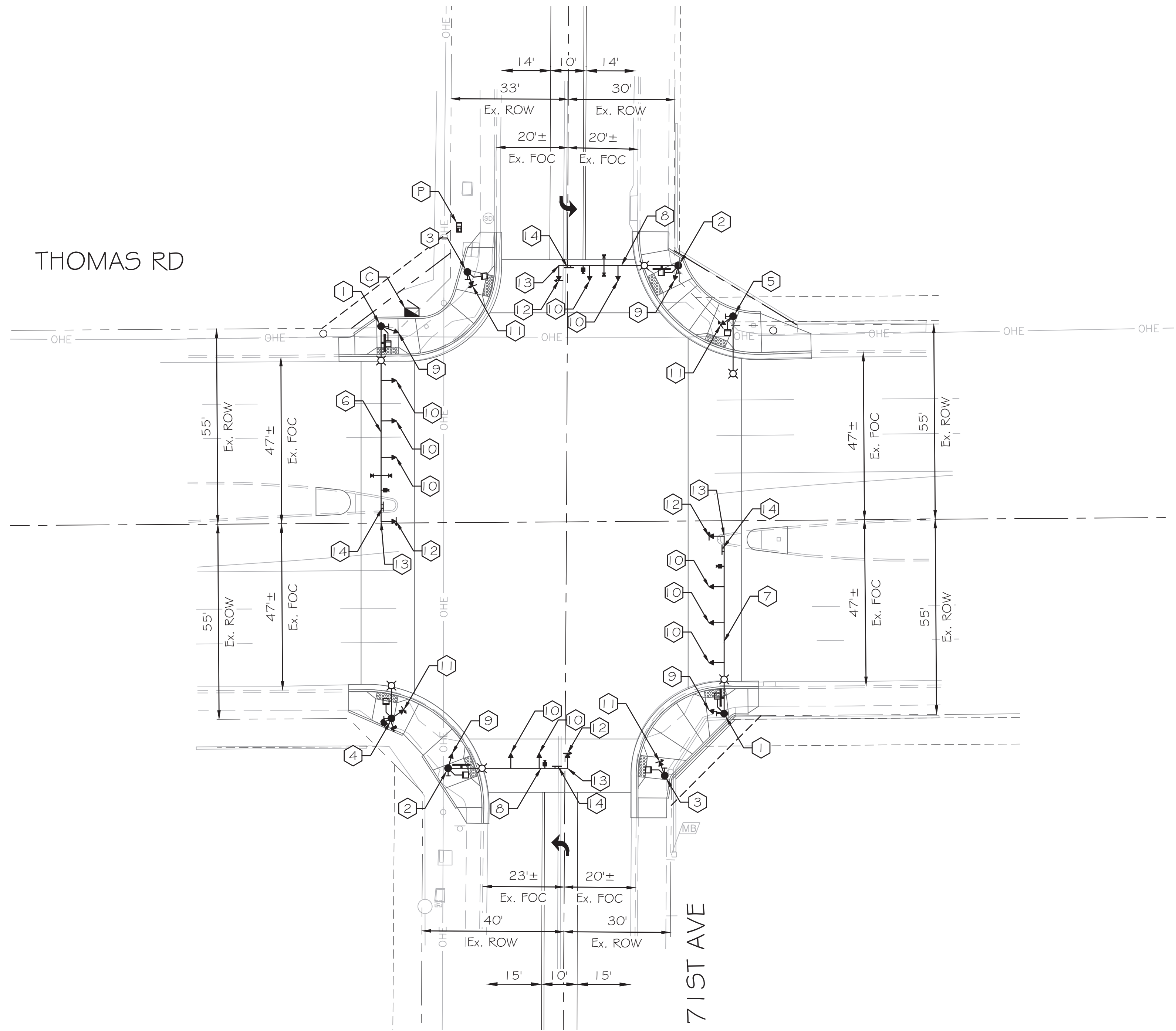
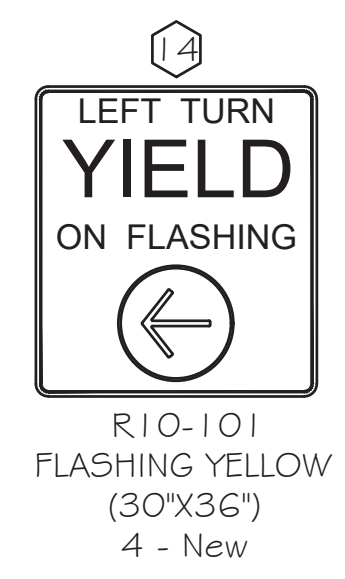
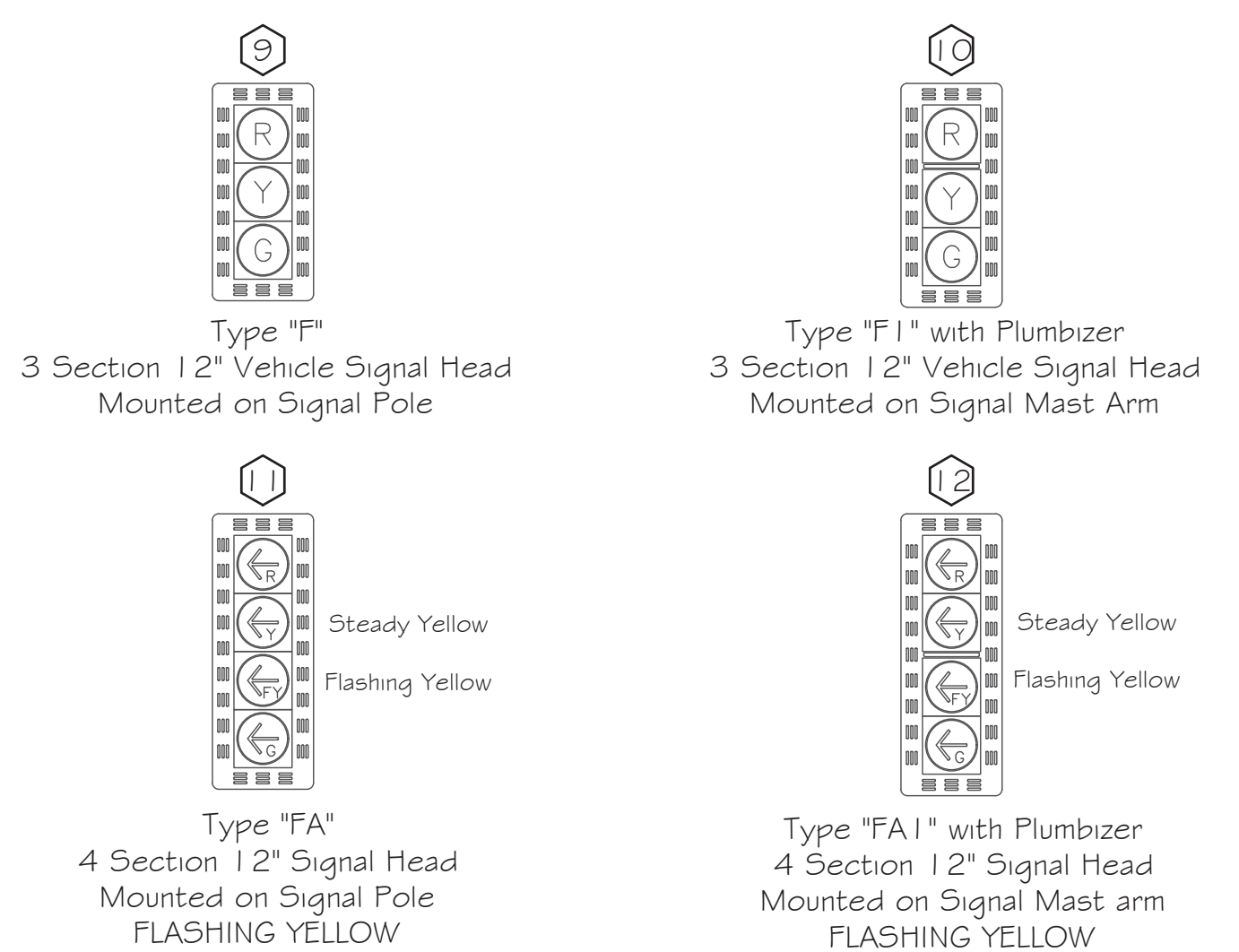
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	23	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GRS CK: HJP DATE: MAR 2023



--- Pedestrian Phase   ← Protected Phase   ← Permitted Phase



- INSTALL
- Ⓢ 8 Phase Controller Cabinet - 1 New
  - Ⓟ Power Service Pedestal w/ Battery Backup - 1 New
  - ① Traffic Signal Pole Type P70 with 5' Riser - 2 New
  - ② Traffic Signal Pole Type P45 with 5' Riser - 2 New
  - ③ Traffic Signal Pole Type AP - 2 New
  - ④ Traffic Signal Pole Type LP with 20' Riser - 1 New
  - ⑤ Traffic Signal Pole Type GP with Luminaire Arm - 1 New
  - ⑥ 55' (M55P70) Signal Mast Arm - 1 New
  - ⑦ 50' (M40P70+E10) Signal Mast Arm - 1 New
  - ⑧ 33' (M30P45+E5) Signal Mast Arm - 2 New
  - ⑨ Type F 12" Signal Head Pole Mount - 4 New
  - ⑩ Type F1 12" Signal Head Mast Arm Mount w/Plumbizer - 10 New
  - ⑪ Type FA 12" Signal Head Pole Mount - 4 New
  - ⑫ Type FA1 12" Signal Head Mast Arm Mount w/Plumbizer - 4 New
  - ⑬ Damper per COP Traffic Signal Standard Detail TS 1-5 - 4 New
- ⓧ LED - 6 New
  - Ⓡ LED Illuminated Street Sign - 4 New (20"X96")
  - Ⓜ Mast Arm Mount Sign - 4 New
  - Ⓟ Pedestrian Head - 8 New
  - Ⓡ APS Push Buttons - 8 New
  - Ⓡ Wireless Radio - 1 Existing on SE Pole (Reuse on SW Pole)
  - Ⓡ PTZ CCTV Camera - 1 New (SW Pole)
  - Ⓡ Vehicle Detection - 4 New
  - Ⓡ 2-Way EVP Device - 2 New

Note:  
All Signing and Striping modifications necessary, including addition of Eastbound and Westbound left turn lanes on 71st Ave, to be done by others (City or Developer), unless shown elsewhere on the plans.



APPROVED BY:

TRAFFIC SIGNAL ENGINEER:

DATE: 6/16/2023

STREET TRANSPORTATION SERVICES DEPARTMENT DEPUTY DIRECTOR:

DATE: 7/7/2023

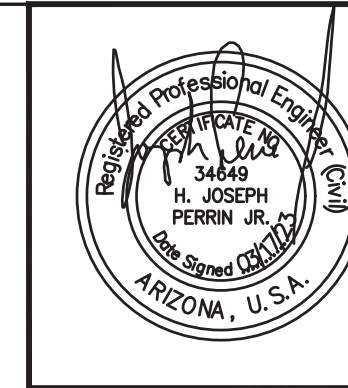
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TRAFFIC SIGNAL PLAN  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

SIGNAL PLAN  
71ST AVE & THOMAS RD  
EQUIPMENT

PROJECT #: ST89340584	FILE NO: 11178
DR: SMD DES: GRS CK: HJP	SHEET NO: 2
DATE: MAR 2023 DATE: MAR 2023 DATE: MAR 2023	TOTAL SHEETS: 4
SCALE: 1" = 20'	Q5. #:





F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	24	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

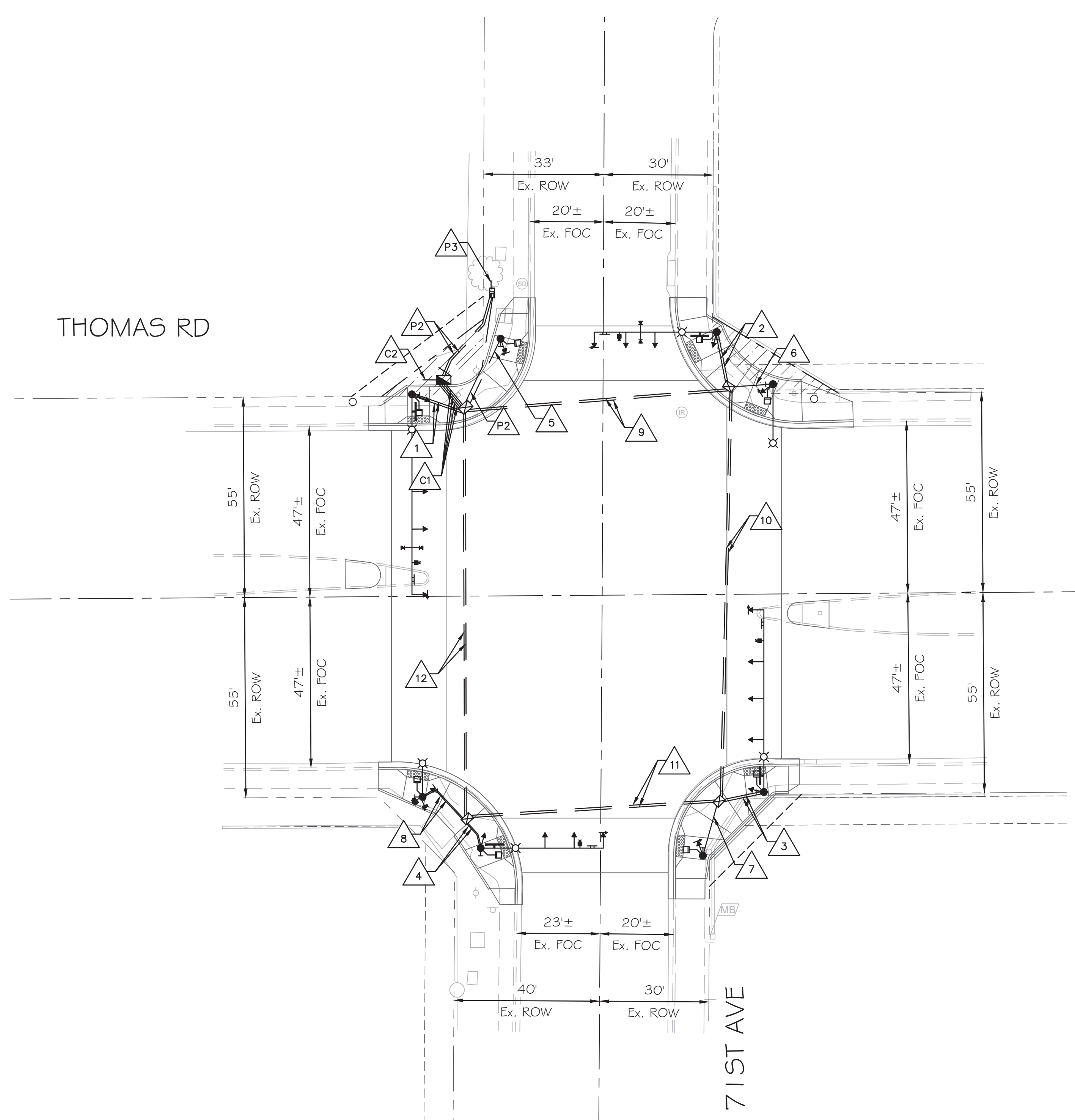
DR: SMD DES: GRS CK: HJP DATE: MAR 2023

TRAFFIC SIGNAL:

71ST AVE & THOMAS RD

PROJECT #: ST89340584

FILE #: 11178



C1 Controller to NWC #7 Junction Box

CONDUIT 1	CONDUIT 2	CONDUIT 3	CONDUIT 4
#10 Bare Copper #10 AWG White 3C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (2) CCTV Cable (1) CAT 5e Cable (1) EVP Detection Cable (1) EVP Confirmation Cable (1)	#10 Bare Copper #10 AWG Black #10 AWG White #10 AWG Green	Detectible Mule Tape

C1 Controller to Stub out

CONDUIT 1
Detectible Mule Tape

P1 Power Service Pedestal to NWC #7 Junction Box

CONDUIT 1
#10 Bare Copper 3C IMSA Cable (Luminaire) 3C IMSA Cable (Sign) 3C IMSA Cable (Radio) 5C IMSA Cable

P2 Power Service Pedestal to Controller

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG Black #10 AWG White #10 AWG Green	#10 Bare Copper CAT 5e Cable (1)

P3 Power Service Pedestal to Stub Out

CONDUIT 1
Detectible Mule Tape

1 NWC #7 Junction Box to P70 Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1) EVP Detection Cable (1) EVP Confirmation Cable (1)

2 NEC Junction Box to P45 Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper

3 SEC Junction Box to P70 Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1)

4 SWC Junction Box to P45 Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper

5 NWC #7 Junction Box to AP Pole

CONDUIT 1
#10 Bare Copper #10 AWG White

6 NEC Junction Box to GP Pole

CONDUIT 1
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)

7 SEC Junction Box to AP Pole

CONDUIT 1
#10 Bare Copper #10 AWG White

8 SWC Junction Box to LP Pole

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 3C IMSA Cable (Radio)	CCTV Cable (1) CAT 5e Cable (1)

9 NWC #7 Junction Box to NEC Junction Box

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (2) EVP Detection Cable (1) EVP Confirmation Cable (1)

10 NEC Junction Box to SEC Junction Box

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (1)

11 SEC Junction Box to SWC Junction Box

CONDUIT 1	CONDUIT 2
42C IMSA Cable	Detectible Mule Tape

12 SWC Junction Box to NWC #7 Junction Box

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 3C IMSA Cable (Radio) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper CCTV Cable (1) CAT 5e Cable (1)



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*

DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

DATE: 7/7/2023

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**TRAFFIC SIGNAL PLAN**

**CITY OF PHOENIX, ARIZONA**

STREET TRANSPORTATION DEPARTMENT

**SIGNAL PLAN**

**71ST AVE & THOMAS RD**

**WIRING**

PROJECT #: ST89340584 FILE NO: 11178

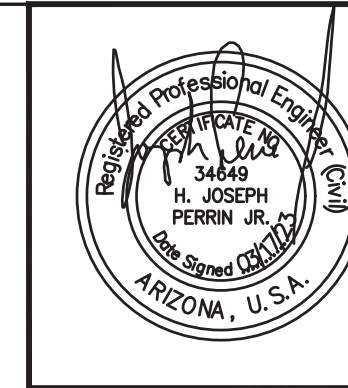
DR: SMD DES: GRS CK: HJP SHEET NO: TOTAL SHEETS

DATE: MAR 2023 DATE: MAR 2023 DATE: MAR 2023 NO: 3

SCALE: 1" = 20' Q5. #: 4

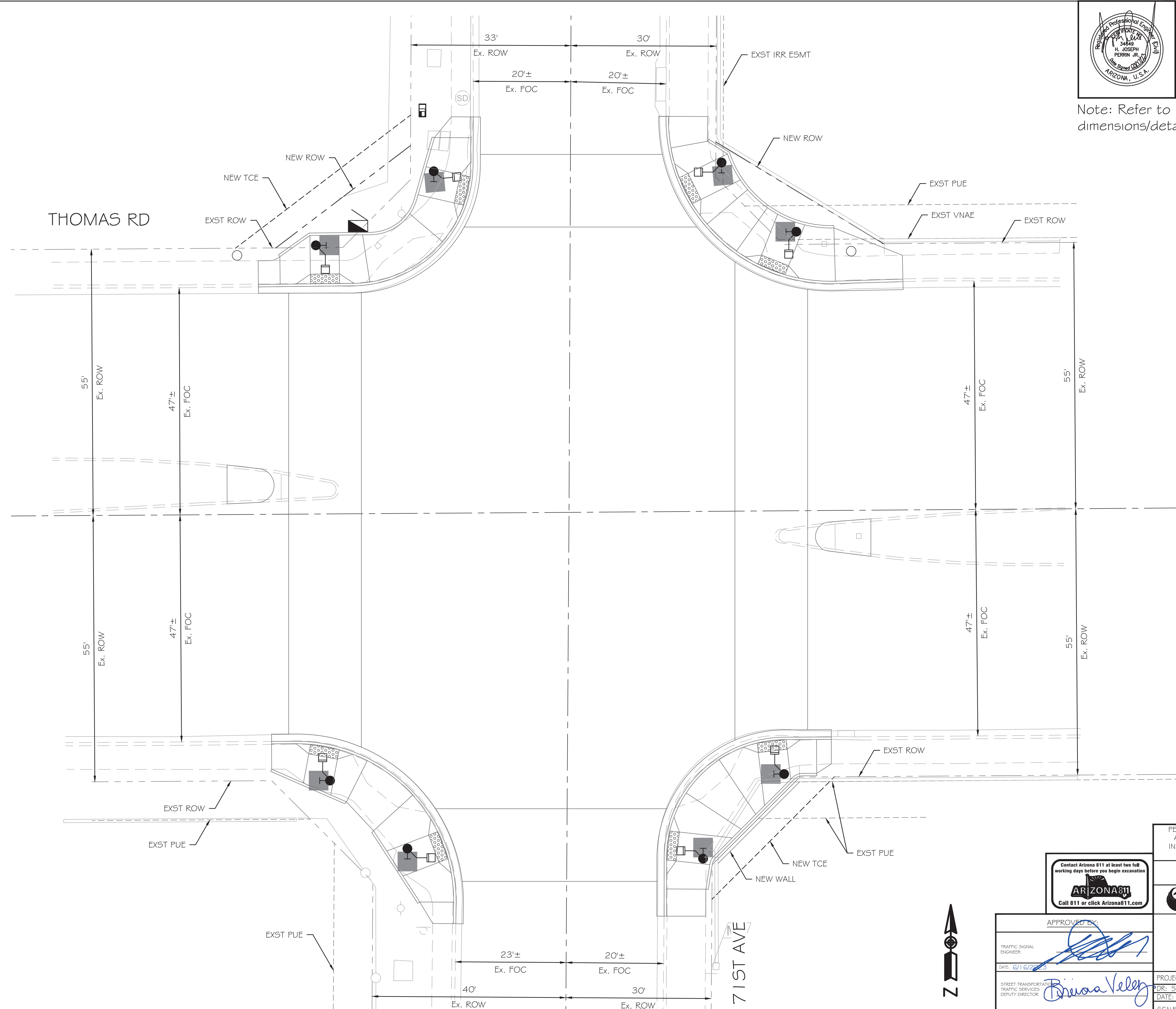






F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	25	31
<b>TRACE CONSULTING</b>		1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034		
DR: SMD	DES: GRS	CK: HJP	DATE: MAR 2023	

Note: Refer to Ramp Improvement Plans for corner dimensions/details.



APPROVED BY:	
TRAFFIC SIGNAL ENGINEER	<i>[Signature]</i>
DATE: 6/16/2023	
STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR	<i>[Signature]</i>
DATE: 7/7/2023	

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<b>TRAFFIC SIGNAL PLAN</b>				
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT				
SIGNAL PLAN 71ST AVE & THOMAS RD RAMP DETAILS				
PROJECT #: ST89340584	FILE NO: 11178			
DR: SMD	DES: GRS	CK: HJP	SHEET NO: 4	TOTAL SHEETS: 4
DATE: MAR 2023	DATE: MAR 2023	DATE: MAR 2023		
SCALE: 1" = 10'	Q5. #:			

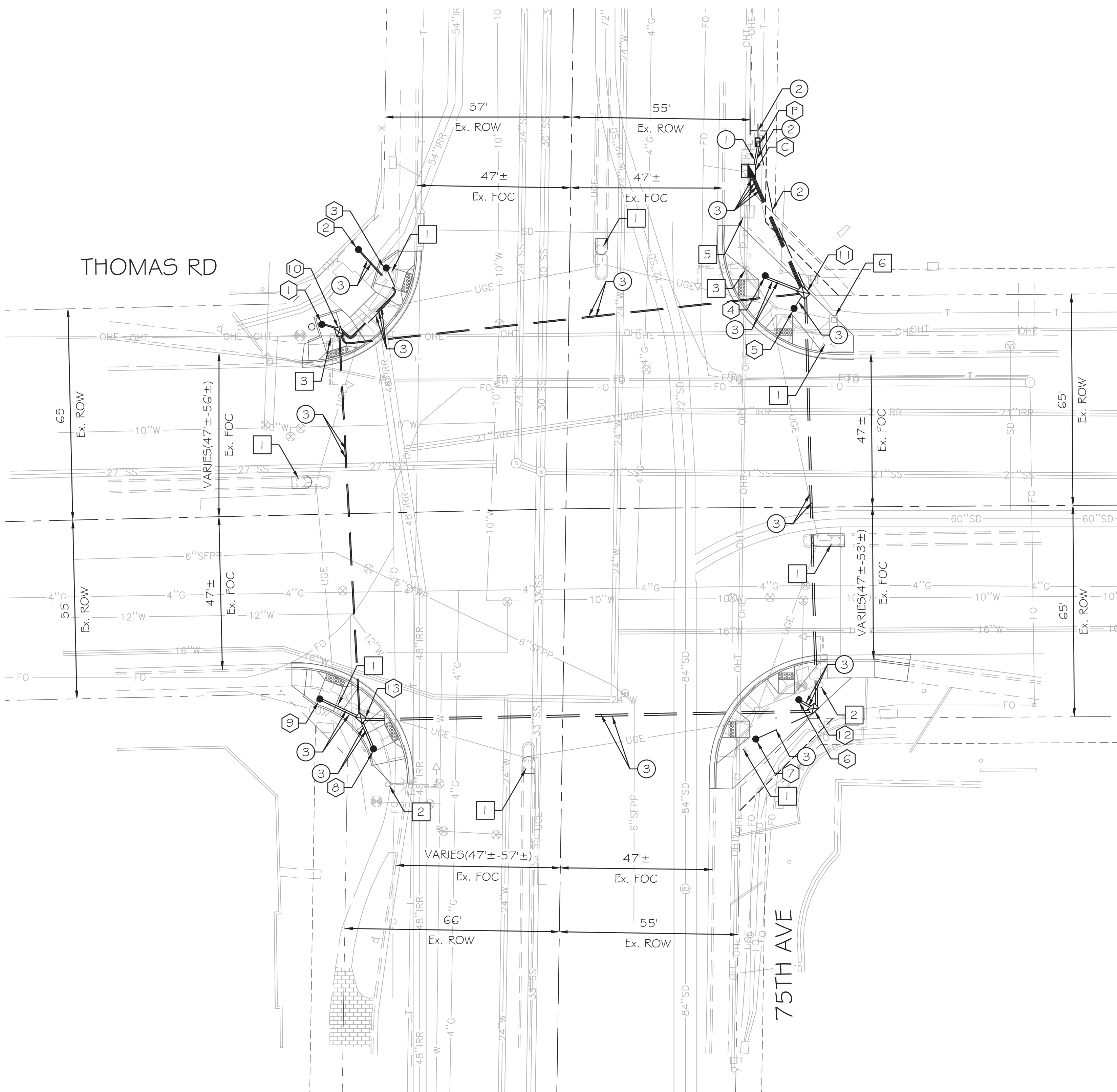
TRAFFIC SIGNAL:

71ST AVE & THOMAS RD

PROJECT #: ST89340584

FILE #: 11178





1. GENERAL NOTES:
- 1.1 The contractor shall notify the City of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to ordering any traffic signal equipment. The contractor shall verify they have the current approved plan set prior to starting and ordering of any equipment.
  - 1.2 The contractor shall layout all ADA ramps, junction boxes and foundation locations for approval by a traffic signal representative. Contractor must have a current visible Bluestake showing all utilities. All ADA ramps shall be laid out in white marking paint to determine best traffic signal pole locations.
  - 1.3 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not been begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director of Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.
  - 1.4 All traffic signal equipment and materials shall follow the current City of Phoenix Traffic Signal Standard Details and Specifications ([www.phoenix.gov/streets/reference-material](http://www.phoenix.gov/streets/reference-material)). The contractor shall have a copy of these standards along with a complete set of approved plans on site at all times during signal and lighting systems construction. The contractor shall have a competent supervisor capable of reading and understanding plans and specifications and thoroughly experienced in the construction of traffic signals. The contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. It will be the responsibility of the contractor to supply verification of certification. If a jobsite is inspected and a certified Electrician is not on site, a stop work order will be issued.
  - 1.5 The contractor is responsible for the construction of the project; its planning, safety, quality and completion. The City of Phoenix inspection team would make the determination if the work performed meets the criteria and if not, may request that the work be redone at the contractor's expense.
  - 1.6 Foundation elevations must be within 1/4" of finished sidewalk grade.
  - 1.7 A minimum of a four (4) foot clear path is required around all traffic signal poles. A four by four (4x4) flat landing centered on the pedestrian push button must be maintained as provided on the Traffic Signal Standard Details (see note 1.4).
  - 1.8 Contractor shall verify location and orientation of all pole and mast arm mounted equipment on all new traffic signal poles and mast arms with the Traffic Signal shop's representative prior to drilling any holes in the poles or mast arms. Failure to get approval may result in replacement of the pole at the contractor's expense.

2. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS
- The contractor shall supply all materials and perform all work except as indicated in note 3.
3. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

Traffic Signal representative shall approve marked layout of ADA ramps, junction boxes and foundation locations prior to excavation, prep contractor furnished controller cabinets and internal equipment (contractor to pick up and install controller cabinet), inspect and approve all traffic signal equipment installed by contractor and terminate, test and activate all field wiring into controller cabinet(s).

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340584	26	31
		1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034			
DR: SMD	DES: GRS	CK: HJP	DATE: MAR 2023		

PROPOSED FOUNDATION SCHEDULE				
NO	TYPE	OFFSET FROM THOMAS RD MON LINE	OFFSET FROM 75TH AVE MON LINE	
P	PSP*	112.4 ft. NORTH	57.3 ft. EAST	
C	CONT	103.6 ft. NORTH	55.6 ft. EAST	
1	P70	58.4 ft. NORTH	75.9 ft. WEST	
2	LP	81.2 ft. NORTH	65.0 ft. WEST	
3	BP	75.3 ft. NORTH	56.4 ft. WEST	
4	P70	71.3 ft. NORTH	60.2 ft. EAST	
5	GP	61.2 ft. NORTH	69.3 ft. EAST	
6	P70	59.2 ft. SOUTH	72.6 ft. EAST	
7	GP	71.2 ft. SOUTH	59.5 ft. EAST	
8	P70	72.5 ft. SOUTH	58.1 ft. WEST	
9	LP	56.8 ft. SOUTH	74.8 ft. WEST	

PROPOSED JUNCTION BOX SCHEDULE				
NO	TYPE	OFFSET FROM THOMAS RD MON LINE	OFFSET FROM 71ST AVE MON LINE	
10	#7	59.8 ft. NORTH	72.1 ft. WEST	
11	#7	66.0 ft. NORTH	72.0 ft. EAST	
12	#7	62.0 ft. SOUTH	77.0 ft. EAST	
13	#7	62.9 ft. SOUTH	62.1 ft. WEST	

- INSTALL**
- ① thru ⑨ See Foundation Schedule
  - ⑩ thru ⑬ See Junction Box Schedule
  - ① 1" Schedule 40 PVC
  - ② 2" Schedule 40 PVC
  - ③ 2-1/2" Schedule 40 PVC
- REMOVE**
- ① Remove Existing 'A' Pole Foundation, Full Depth, Per COP Traffic Spec 479.2.4 - 8
  - ② Remove Existing Foundation a Minimum of 10" Below Finished Grade Per COP Traffic Spec 479.2.4 - 2
  - ③ Remove Existing Mixed Use Pole (By Others) - 2
  - ⑤ Controller Cabinet and Foundation - 1
  - ⑥ Power Service Pedestal and Foundation - 1

Note:  
See Sheet 5 of 31 for SRP Undercrossing Detail

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APPROVED BY:

TRAFFIC SIGNAL ENGINEER:

DATE: 6/16/2023

STREET TRANSPORTATION SERVICES DEPARTMENT DEPUTY DIRECTOR:

DATE: 7/7/2023

TRAFFIC SIGNAL PLAN  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

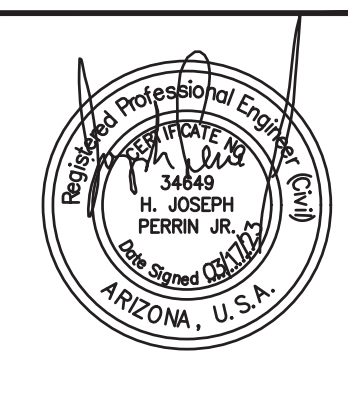
SIGNAL PLAN  
75TH AVE & THOMAS RD  
FOUNDATION

PROJECT #: ST89340584	FILE NO: 11179
DR: SMD	DES: GRS
DATE: MAR 2023	DATE: MAR 2023
CK: HJP	DATE: MAR 2023
SHEET NO: 1	TOTAL SHEETS: 4
SCALE: 1" = 20'	Q5. #:



TRAFFIC SIGNAL: 75TH AVE & THOMAS RD PROJECT #: ST89340584 FILE #: 11179

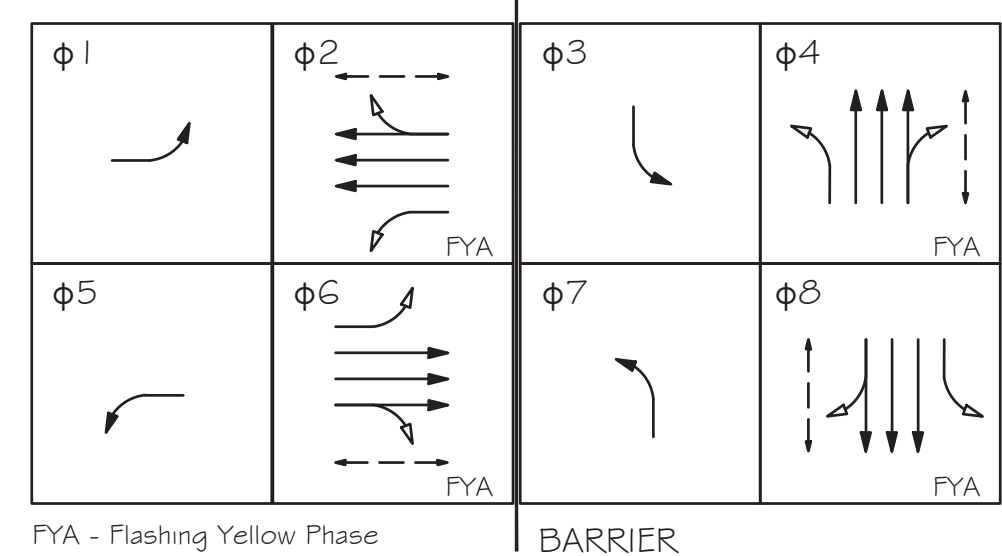




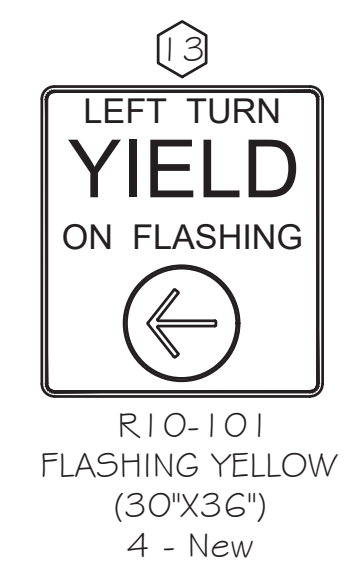
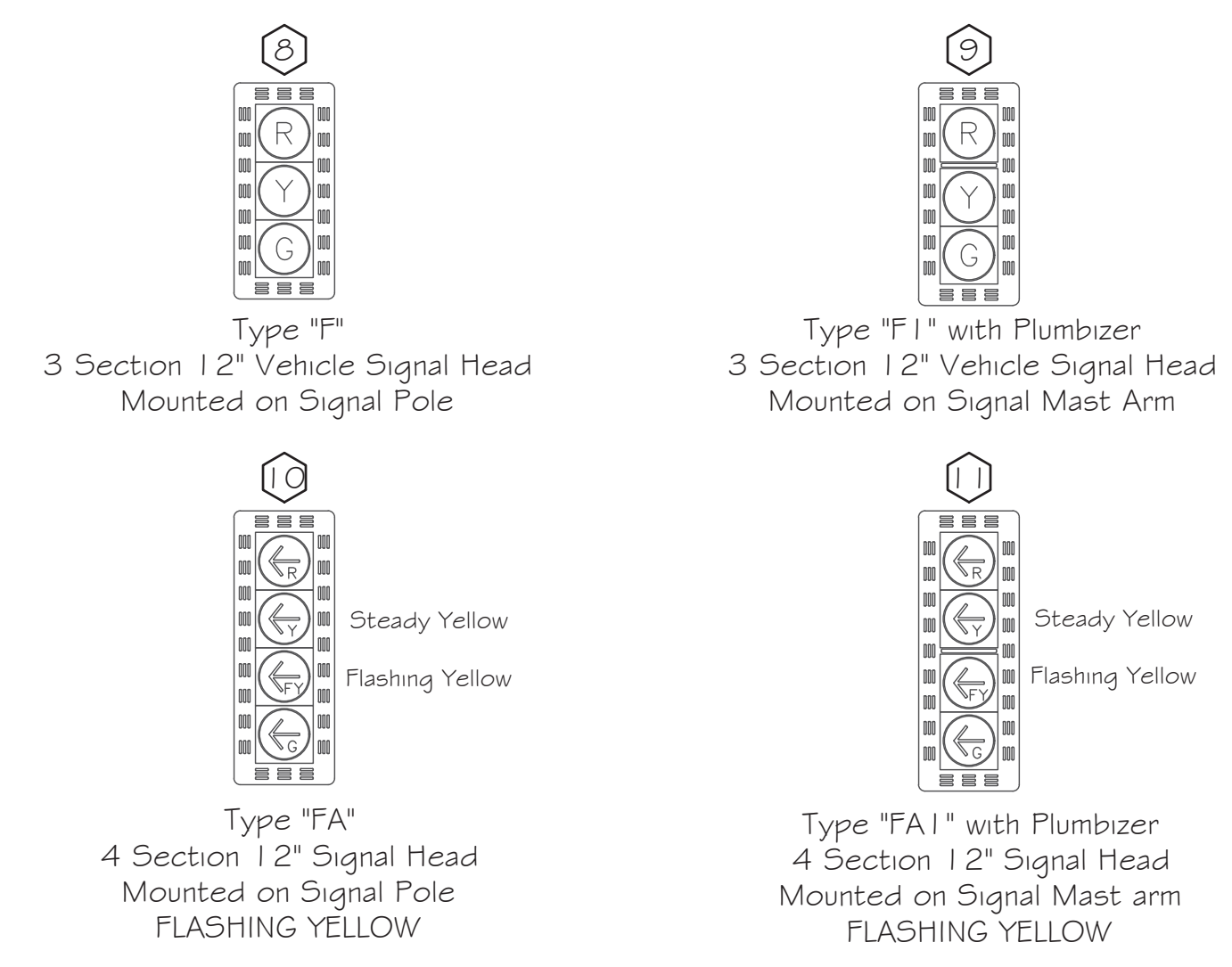
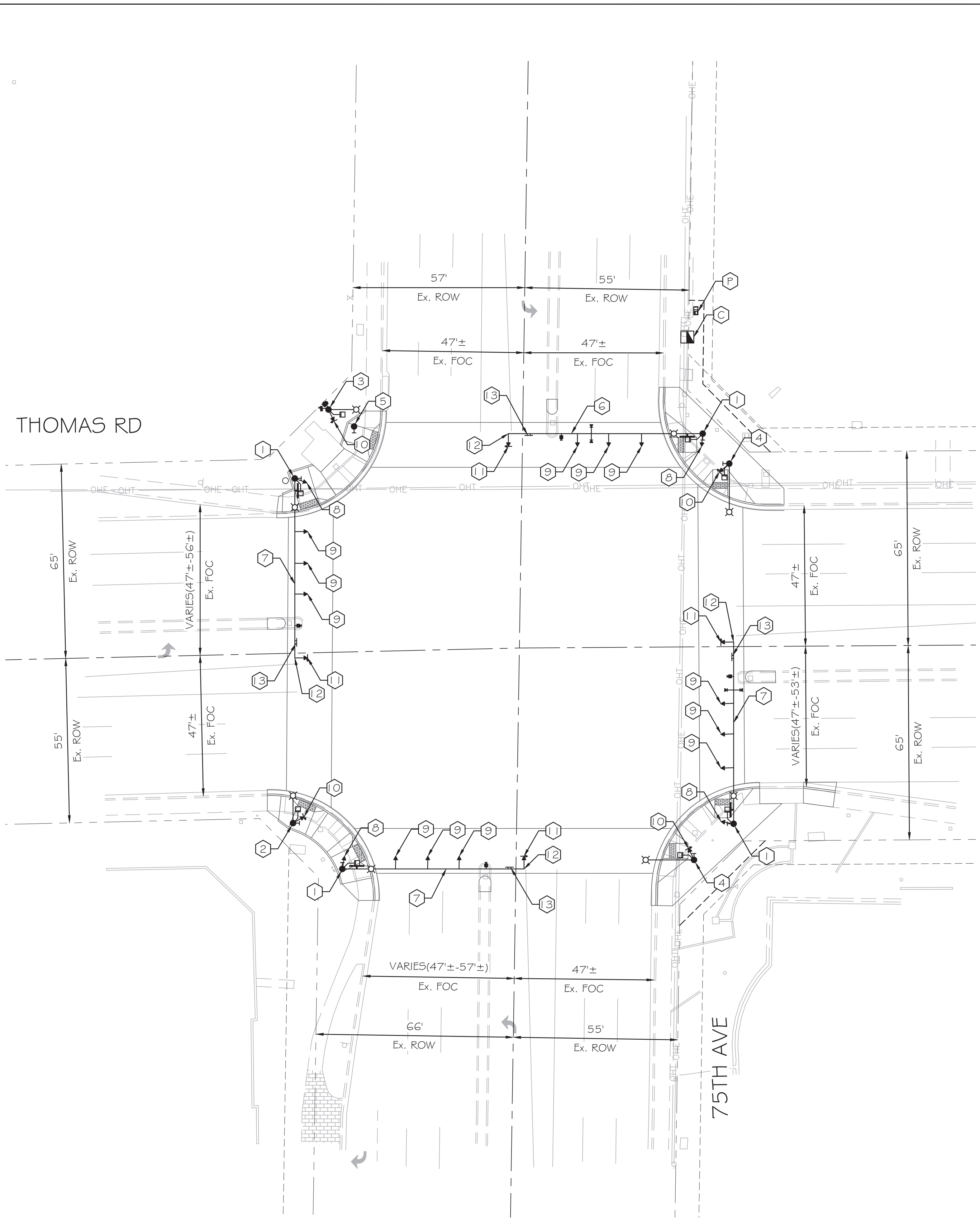
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	27	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GR5 CK: HJP DATE: MAR 2023



--- Pedestrian Phase ← Protected Phase ← Permitted Phase



- INSTALL
- (C) 8 Phase Controller Cabinet - 1 New
  - (P) Power Service Pedestal w/ Battery Backup - 1 New
  - (1) Traffic Signal Pole Type P70 with 5' Riser - 4 New
  - (2) Traffic Signal Pole Type LP with 5' Riser - 1 New
  - (3) Traffic Signal Pole Type LP with 20' Riser - 1 New
  - (4) Traffic Signal Pole Type GP with Luminaire Arm- 2 New
  - (5) Traffic Signal Pole Type BP - 1 New
  - (6) 65' (M55P70+E1O) Signal Mast Arm - 1 New
  - (7) 60' (M55P70+E5) Signal Mast Arm - 3 New
  - (8) Type F 12" Signal Head Pole Mount - 4 New
  - (9) Type F1 12" Signal Head Mast Arm Mount w/Plumbizer - 12 New
  - (10) Type FA 12" Signal Head Pole Mount - 4 New
  - (11) Type FA1 12" Signal Head Mast Arm Mount w/Plumbizer - 4 New
  - (12) Damper per COP Traffic Signal Standard Detail TS 1-5 - 4 New
- LED - 8 New
  - LED Illuminated Street Sign - 4 New (20'X96")
  - Mast Arm Mount Sign - 4 New
  - Pedestrian Head - 8 New
  - APS Push Buttons - 8 New
  - Wireless Radio - 1 Existing on SW Pole (Reuse on NW Pole)
  - PTZ CCTV Camera - 1 New (NW Pole)
  - Vehicle Detection - 4 New
  - 2-Way EVP Device - 2 New



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*

DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

DATE: 7/7/2023

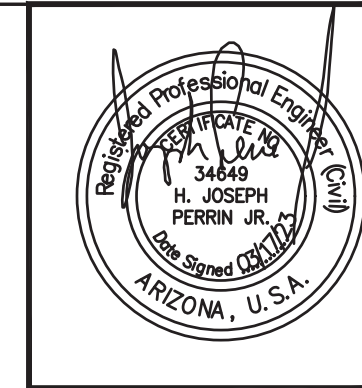
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TRAFFIC SIGNAL PLAN  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

SIGNAL PLAN  
75TH AVE & THOMAS RD  
EQUIPMENT

PROJECT #: ST89340584	FILE NO: 11179
DR: SMD DES: GR5 CK: HJP	SHEET NO: 2
DATE: MAR 2023 DATE: MAR 2023 DATE: MAR 2023	TOTAL SHEETS: 4
SCALE: 1" = 20'	Q5. #:





F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	28	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

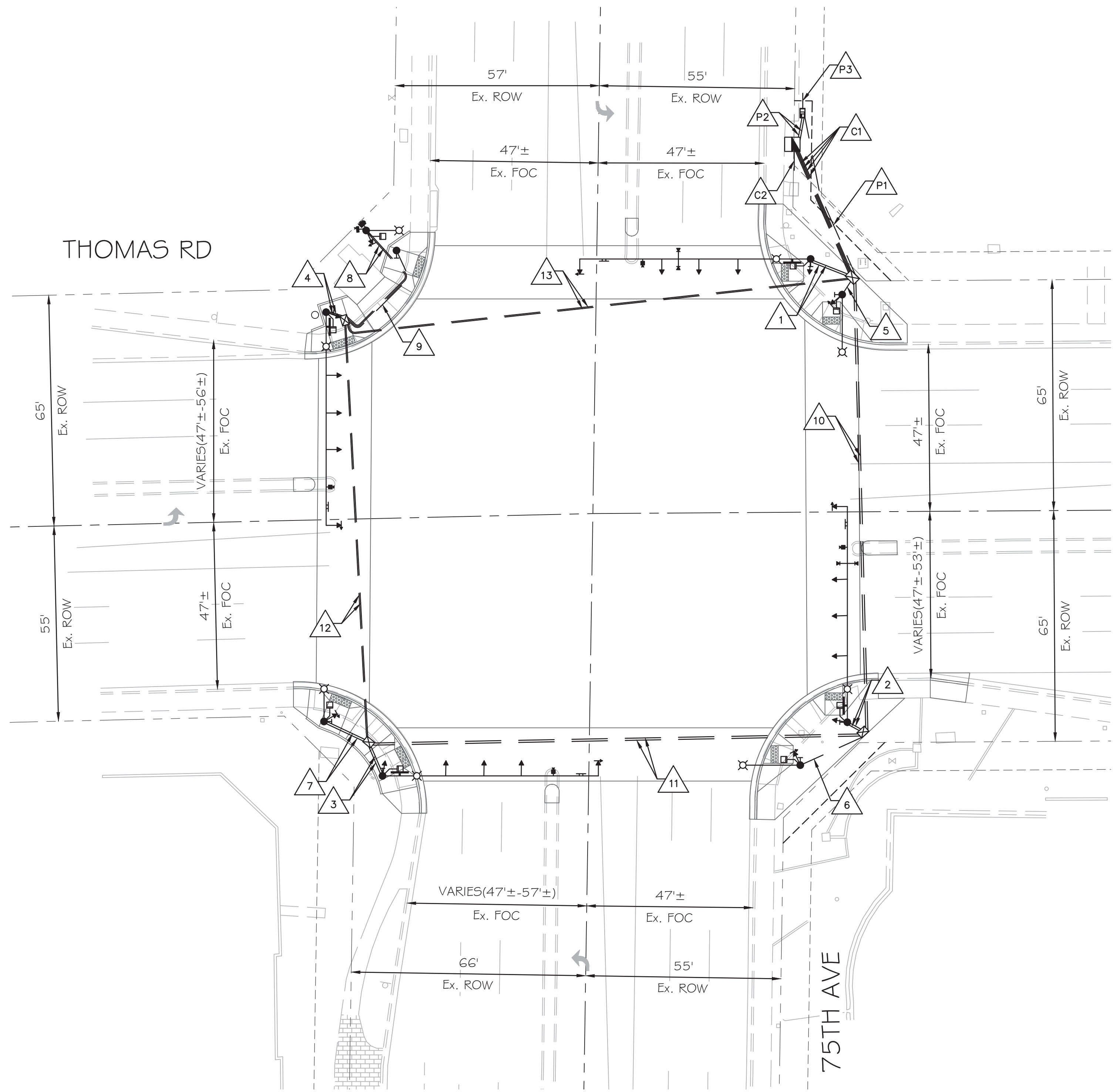
DR: SMD DES: GR5 CK: HJP DATE: MAR 2023

TRAFFIC SIGNAL:

75TH AVE & THOMAS RD

PROJECT #: ST89340584

FILE #: 11179



**C1 Controller to NEC #7 Junction Box**

CONDUIT 1	CONDUIT 2	CONDUIT 3	CONDUIT 4
#10 Bare Copper #10 AWG White 3C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (4) CCTV Cable (1) CAT 5e Cable (1) EVP Detection Cable (2) EVP Confirmation Cable (2)	#10 Bare Copper #10 AWG Black #10 AWG White #10 AWG Green	Detectible Mule Tape

**C2 Controller to Stub Out**

CONDUIT 1
Detectible Mule Tape

**P1 Power Service Pedestal to NEC #7 Junction Box**

CONDUIT 1
#10 Bare Copper 3C IMSA Cable (Luminaire) 3C IMSA Cable (Sign) 3C IMSA Cable (Radio) 5C IMSA Cable

**P2 Power Service Pedestal to Controller**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG Black #10 AWG White #10 AWG Green	#10 Bare Copper CAT 5e Cable (1)

**P3 Power Service Pedestal to Stub Out**

CONDUIT 1
Detectible Mule Tape

**1 NEC #7 Junction Box to P70 Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1) EVP Detection Cable (1) EVP Confirmation Cable (1)

**2 SEC Junction Box to P70 Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1) EVP Detection Cable (1) EVP Confirmation Cable (1)

**3 SWC Junction Box to P70 Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1)

**4 NWC Junction Box to P70 Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Sign) 3C IMSA Cable (Luminaire) 25C IMSA Cable	#10 Bare Copper Video Detection (1)

**5 NEC #7 Junction Box to GP Pole**

CONDUIT 1
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)

**6 SEC Junction Box to GP Pole**

CONDUIT 1
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)

**7 SWC Junction Box to LM COMM Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire)	Detectible Mule Tape

**8 NWC Junction Box to LP Pole**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 3C IMSA Cable (Radio)	Detectible Mule Tape CCTV Cable (1) CAT 5e Cable (1)

**9 NWC Junction Box to BP Pole**

CONDUIT 1
#10 Bare Copper #10 AWG White

**10 NEC #7 Junction Box to SEC Junction Box**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (2) EVP Detection Cable (1) EVP Confirmation Cable (1)

**11 SEC Junction Box to SWC Junction Box**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (1)

**12 SWC Junction Box to NWC Junction Box**

CONDUIT 1	CONDUIT 2
42C IMSA Cable	Detectible Mule Tape

**13 NWC Junction Box to NEC #7 Junction Box**

CONDUIT 1	CONDUIT 2
#10 Bare Copper #10 AWG White 3C IMSA Cable (Luminaire) 5C IMSA Cable 42C IMSA Cable	#10 Bare Copper Video Detection (1)



APPROVED BY: *[Signature]*  
DATE: 6/16/2023  
TRAFFIC SIGNAL ENGINEER  
STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR  
DATE: 7/7/2023

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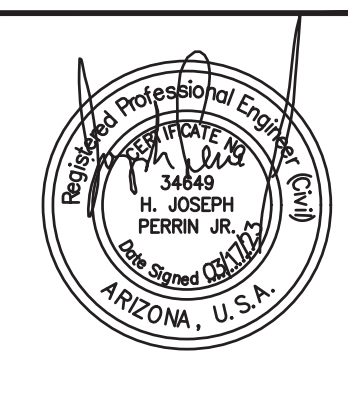
**TRAFFIC SIGNAL PLAN**  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

**SIGNAL PLAN**  
75TH AVE & THOMAS RD  
WIRING

PROJECT #: ST89340584	FILE NO: 11179
DR: SMD DES: GR5 CK: HJP	SHEET NO: 28
DATE: MAR 2023	TOTAL SHEETS: 31
SCALE: 1" = 20'	Q5. #: 3





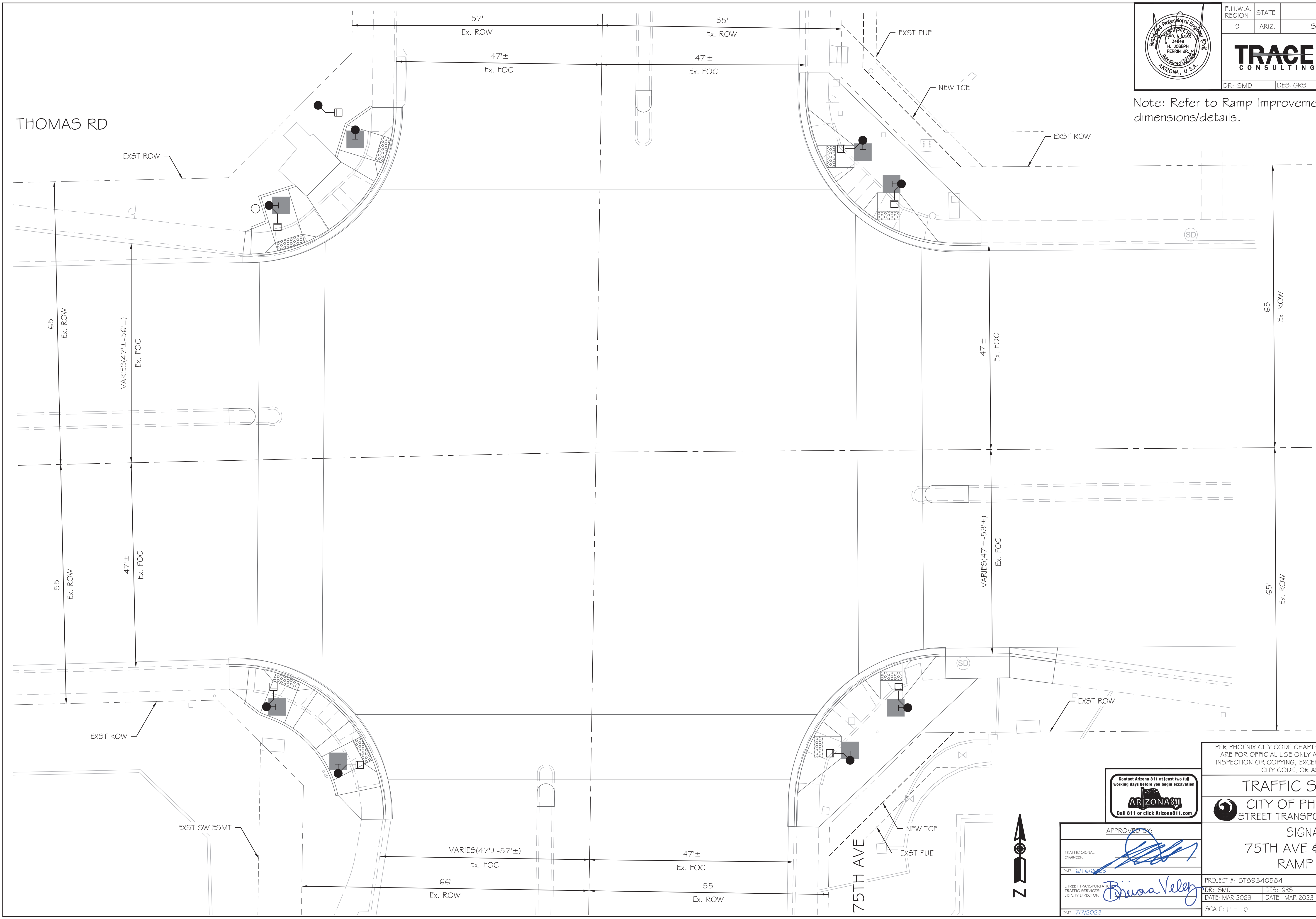


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	29	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GR5 CK: HJP DATE: MAR 2023

Note: Refer to Ramp Improvement Plans for corner dimensions/details.



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TRAFFIC SIGNAL PLAN  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

SIGNAL PLAN  
75TH AVE & THOMAS RD  
RAMP DETAILS



APPROVED BY:

TRAFFIC SIGNAL ENGINEER: *[Signature]*

DATE: 6/16/2023

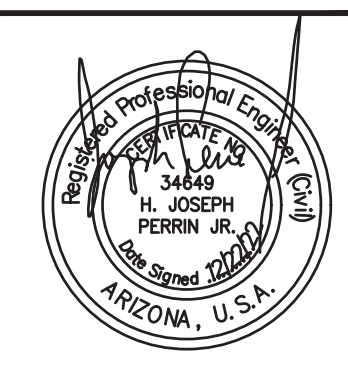
STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

DATE: 7/7/2023

PROJECT #: ST89340584	FILE NO: 11179
DR: SMD DES: GR5 CK: HJP	SHEET NO: 29
DATE: MAR 2023 DATE: MAR 2023 DATE: MAR 2023	TOTAL SHEETS: 31
SCALE: 1" = 10'	Q5. #: 4







F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	30	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GR5 CK: HJP DATE: DEC 2022

GENERAL NOTES

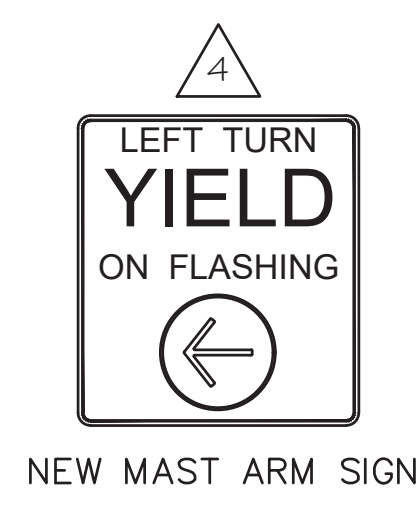
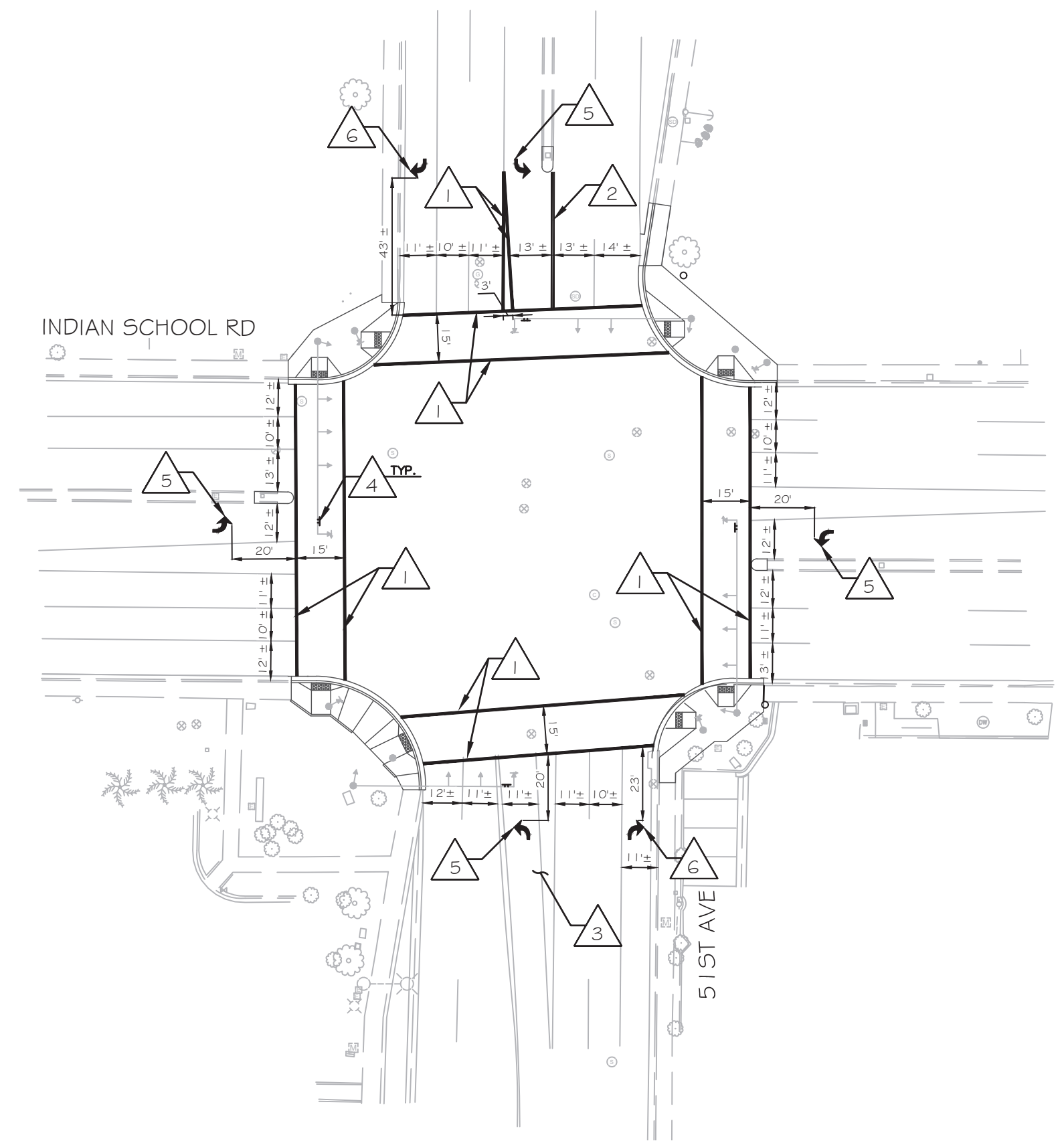
1. CONTRACTOR SHALL OBLITERATE ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED MARKINGS.

PAVEMENT MARKING NOTES

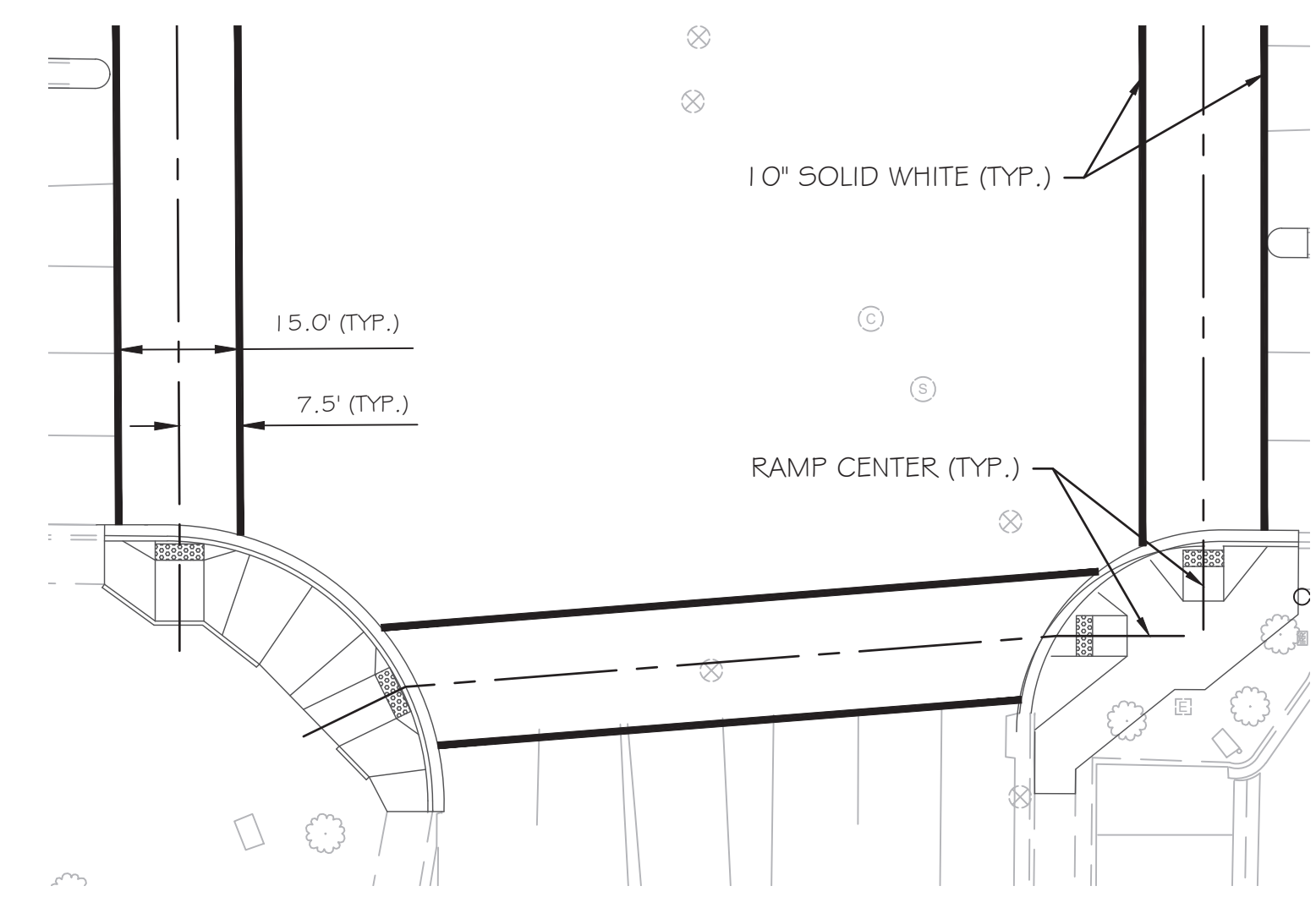
NO.	DESCRIPTION
1	APPLY 10-INCH (10") SOLID WHITE PAVEMENT MARKING
2	APPLY 4-INCH (4") SOLID DOUBLE YELLOW PAVEMENT MARKING
3	PAINT NEW INTERSECTION STRIPING WITHIN LIMITS OF MICROSURFACE TREATMENT
5	INSTALL NEW PREFORMED THERMOPLASTIC ARROW (LEFT) PER ADOT STD DTL M-10
6	INSTALL NEW PREFORMED THERMOPLASTIC ARROW (RIGHT) PER ADOT STD DTL M-10

NOTES:

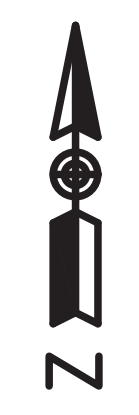
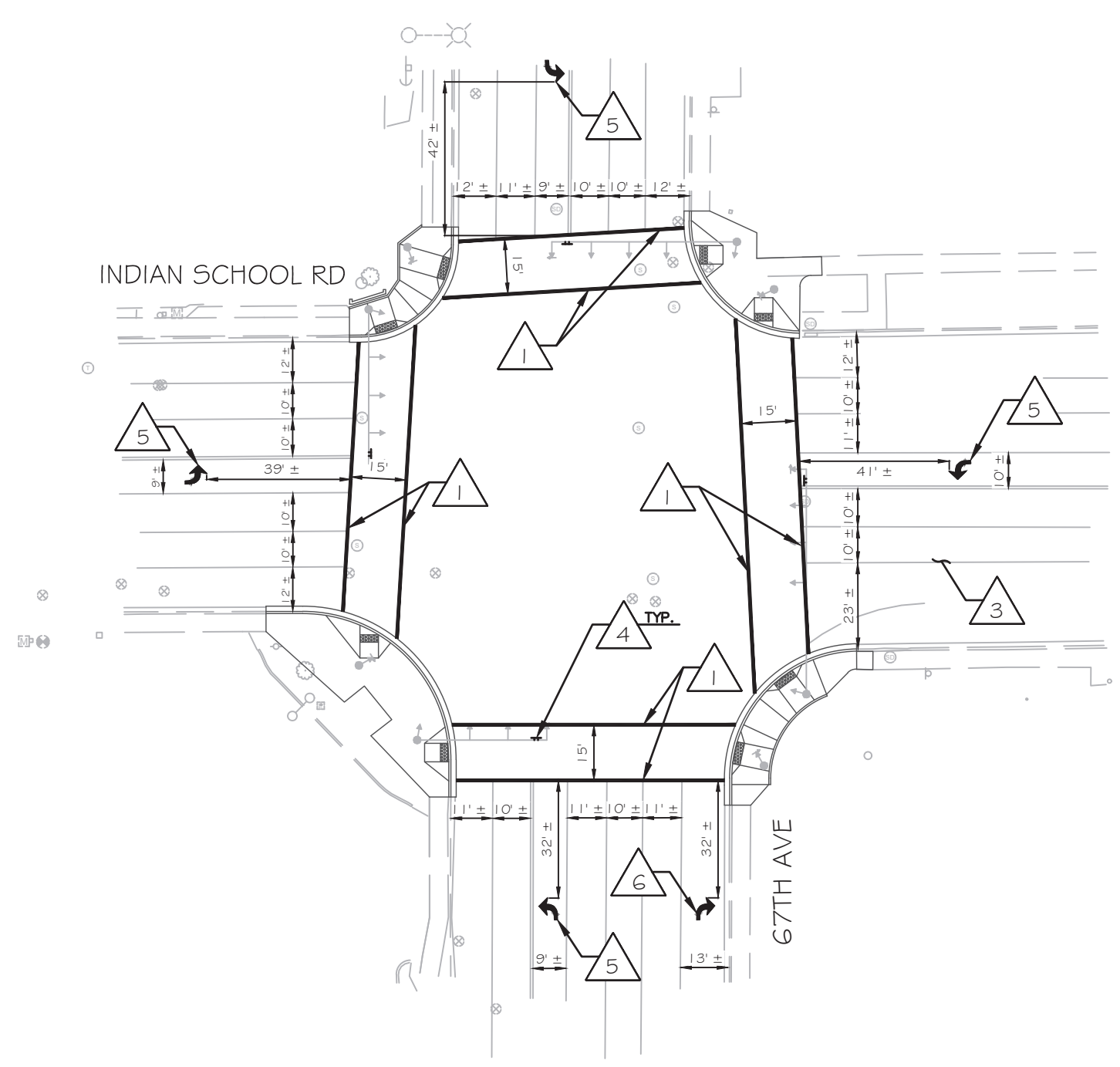
- STRIPING PLAN APPROVAL IS VALID FOR 365 CALENDAR DAYS FROM DATE SIGNED. IF THE NOTIFICATION IS NOT RECEIVED PRIOR TO THE 365 DAYS ELAPSING, THE STRIPING PLAN MUST BE RE-SUBMITTED FOR APPROVAL OR AN EXTENSION GRANTED BY THE TRAFFIC SERVICES DEPUTY DIRECTOR OR AN AUTHORIZED REPRESENTATIVE TO ENSURE THAT THE PROPOSED STRIPING PLAN IS STILL ACCEPTABLE.
- THE CITY OF PHOENIX INSPECTOR SHALL NOTIFY THE CITY OF PHOENIX TRAFFIC SERVICES FIELD INVESTIGATOR UNIT (602)262-4684 A MINIMUM OF FIFTEEN (15) BUSINESS DAYS PRIOR TO HAVING TRAFFIC SIGN AND PAVEMENT WORK COMMENCE.



- LOCATIONS:
- 51ST AVE & INDIAN SCHOOL RD
  - 67TH AVE & INDIAN SCHOOL RD



15 FT. CROSSWALK DETAIL



PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

STRIPING PLAN  
CITY OF PHOENIX, ARIZONA  
STREET TRANSPORTATION DEPARTMENT

51ST AVE & INDIAN SCHOOL RD  
67TH AVE & INDIAN SCHOOL RD

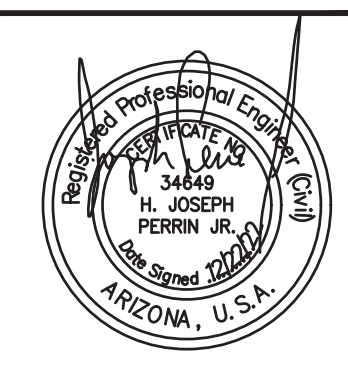
APPROVED BY:

TRAFFIC SERVICES ENGINEER: *[Signature]*  
DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*  
DATE: 7/7/2023

PROJECT #: ST89340584	FILE NO: 11330
DR: SMD DES: GR5 CK: HJP	SHEET NO: 30
DATE: DEC 2022	TOTAL SHEETS: 31
SCALE: 1" = 40'	Q5. #:





F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST89340584	31	31

**TRACE CONSULTING** 1201 E. Jefferson St. Suite 3 Phoenix, AZ 85034

DR: SMD DES: GRS CK: HJP DATE: DEC 2022

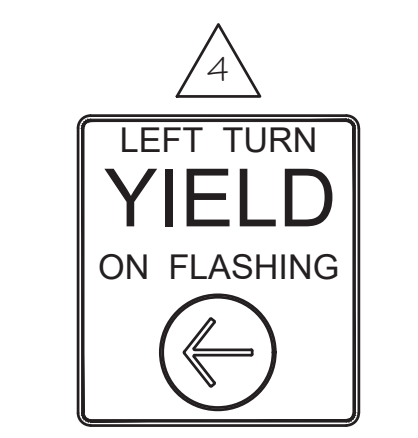
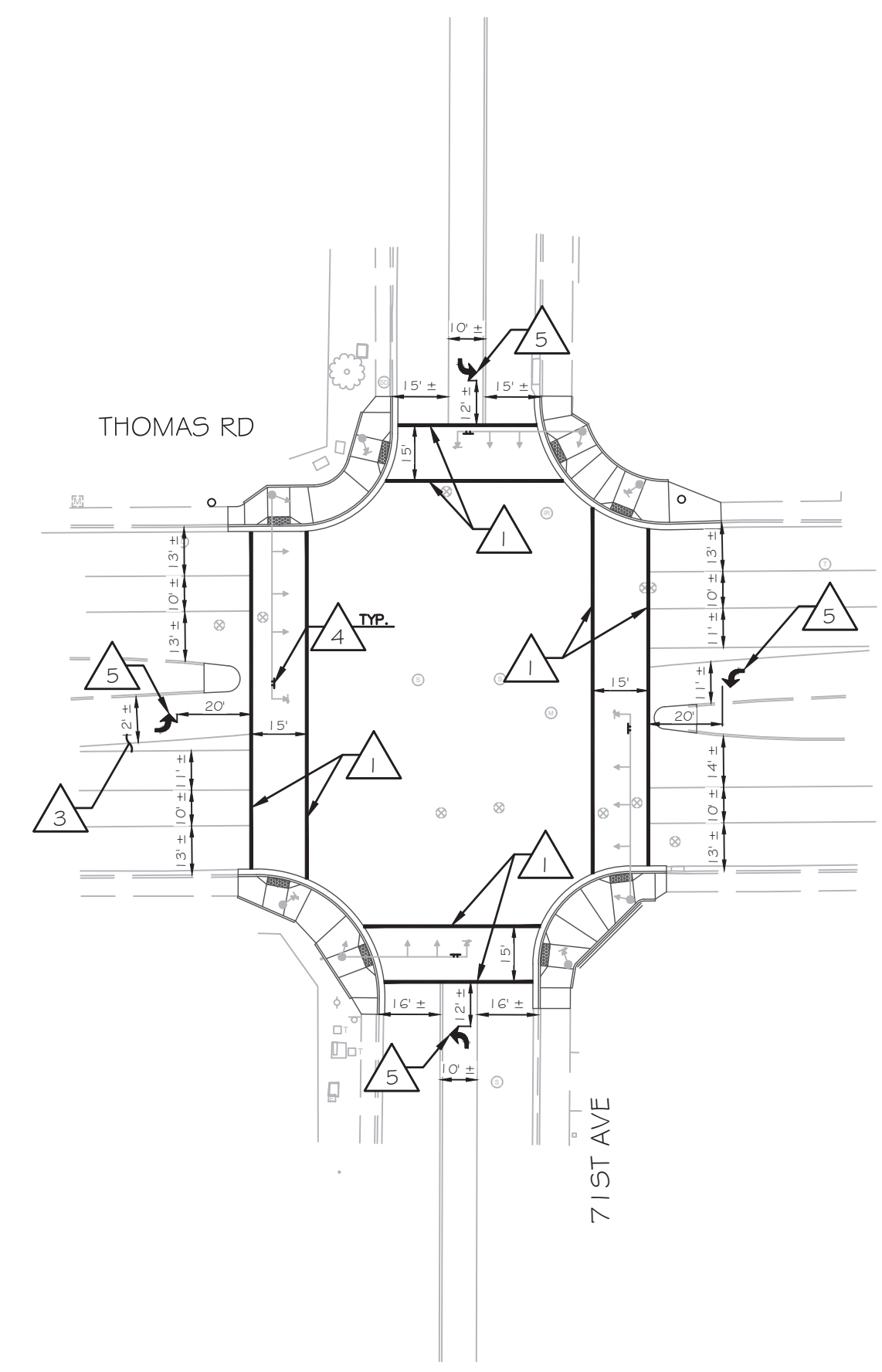
GENERAL NOTES

1. CONTRACTOR SHALL OBLITERATE ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED MARKINGS.

PAVEMENT MARKING NOTES

NO.	DESCRIPTION
1	APPLY 10-INCH (10") SOLID WHITE PAVEMENT MARKING
3	PAINT NEW INTERSECTION STRIPING WITHIN LIMITS OF MICROSURFACE TREATMENT
5	INSTALL NEW PREFORMED THERMOPLASTIC ARROW (LEFT) PER ADOT STD DTL M-10
6	INSTALL NEW PREFORMED THERMOPLASTIC ARROW (RIGHT) PER ADOT STD DTL M-10

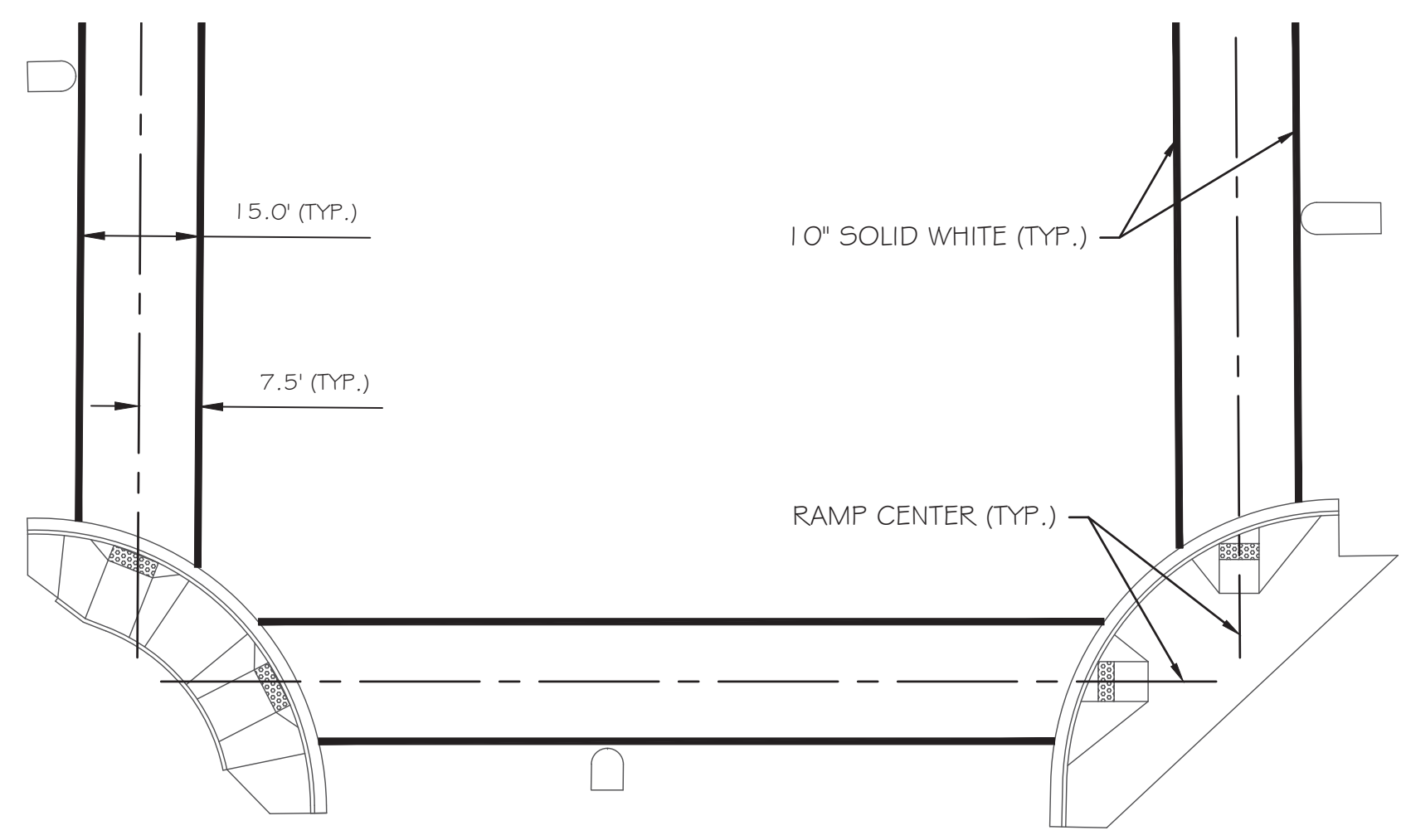
- NOTES:
- STRIPING PLAN APPROVAL IS VALID FOR 365 CALENDAR DAYS FROM DATE SIGNED. IF THE NOTIFICATION IS NOT RECEIVED PRIOR TO THE 365 DAYS ELAPSING, THE STRIPING PLAN MUST BE RE-SUBMITTED FOR APPROVAL OR AN EXTENSION GRANTED BY THE TRAFFIC SERVICES DEPUTY DIRECTOR OR AN AUTHORIZED REPRESENTATIVE TO ENSURE THAT THE PROPOSED STRIPING PLAN IS STILL ACCEPTABLE.
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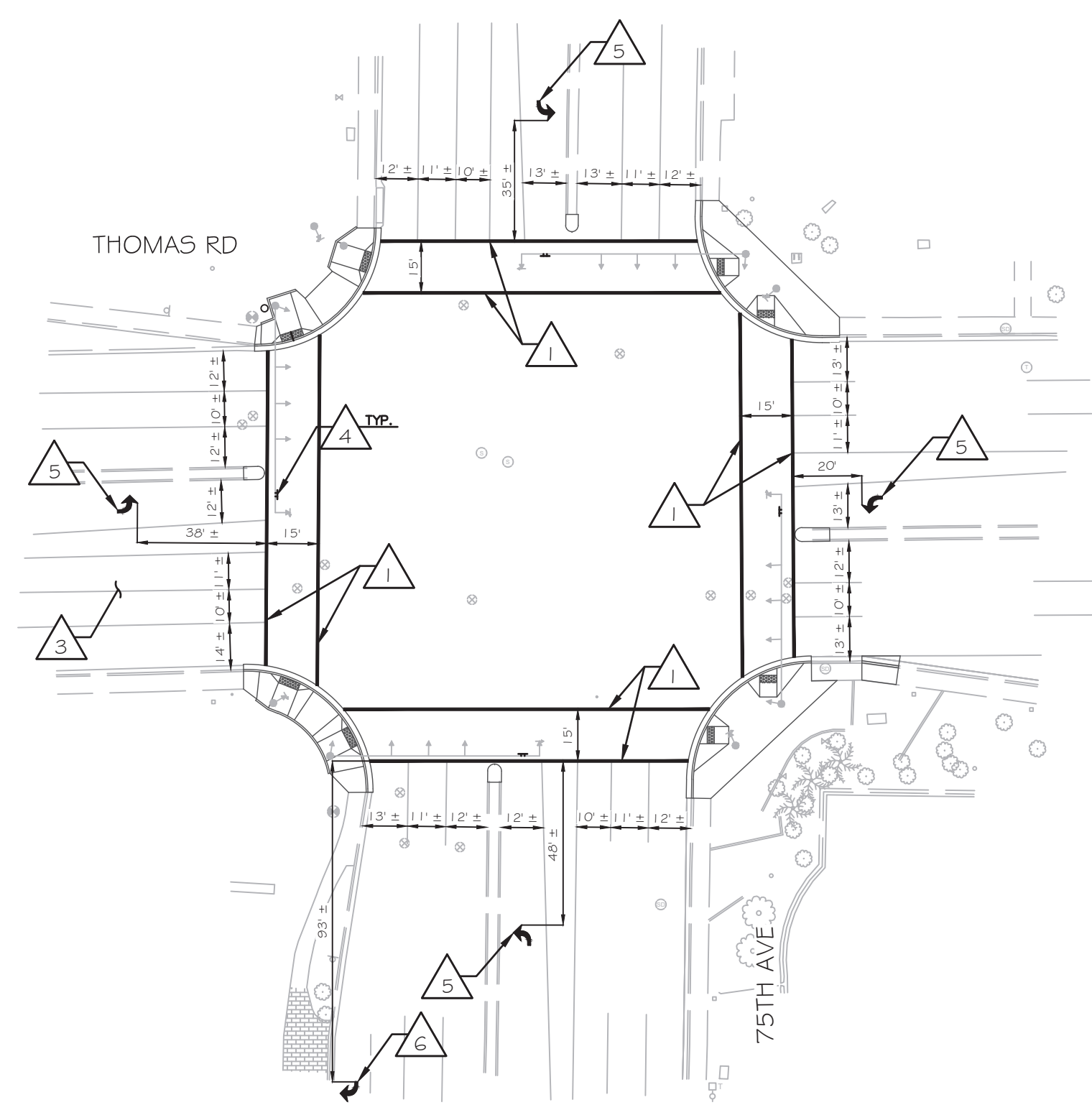
NEW MAST ARM SIGN

LOCATIONS:

- 71ST AVE & THOMAS RD
- 75TH AVE & THOMAS RD



15 FT. CROSSWALK DETAIL



APPROVED BY:

TRAFFIC SERVICES ENGINEER: *[Signature]*

DATE: 6/16/2023

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR: *[Signature]*

DATE: 7/7/2023

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STRIPING PLAN CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT

71ST AVE & THOMAS RD			
75TH AVE & THOMAS RD			
PROJECT #:	ST89340584	FILE NO.:	11331
DR:	SMD	DES:	GRS
DATE:	DEC 2022	CK:	HJP
DATE:	DEC 2022	DATE:	DEC 2022
SCALE:	1" = 40'	Q.S. #:	2
SHEET NO.:	31	TOTAL SHEETS:	31

